THE

# AMERICAN FARMER:

DEVOTED TO

## Agriculture, Horticulture and Rural Economy.

[ESTABLISHED 1819.]

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

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### APRIL.

"Again the infant flowers of Spring
Call thee to sport on thy rainbow wing—
Spirit of beauty! the air is bright
With the boundless flow of thy mellow light;
The woods are ready to bud and bloom,
And are weaving for Summer their quiet gloom;
The tufted brook reflects, as it flows,
The tips of the half-unopened rose;
And the early bird, as he carols free,
Sings to his little love and thee."

## WORK FOR THE MONTH.

Press forward with despatch the breaking of all sod land intended for Corn, Tobacco or other hoed crop. Bear in mind the importance of ploughing deep and well, and give this work your close attention throughout. There is no part of the farm work that demands so rigid supervision. A strong team, well geared to a good plough, with a good ploughman, and, after all, *the eye of the master*, are requisite to a well ploughed field, and that is the foundation work of the year's operations.

SUB-SOILING.

A general system of sub-soiling is not to be anticipated in our farm-practice for many years to come, yet it is one of those advance steps in the path of improvement which we might enter on in some degree. We do know a Virginia farmer who has sub-soiled his whole farm of five hundred acres. All of us may make a beginning and apply the sub-soil plough at least to favourite lots and to all grounds requiring special cultivation. It is particularly advisable on lands having a hard pan impervious to water not far from the surface. Such lands get so thoroughly soaked in wet weather, and bake so hard when it is dry, that they are comparatively worthless. To break this pan with a sub-soil plough to the depth of fifteen inches, and cultivate in a direction to allow the water to pass away, will improve such soils wonderfully.

OATS AND BARLEY.

If these crops are not sown as suggested last month, no time should now be lost. There is a very small chance for late sown crops of these grains.

FENCES.

It is to be hoped that all material has been got in place for the repair of old fences and making of new. Have all enclosures at once put in complete order. Do not multiply new fences, but dispense with them as far as practicable. Fencing is a very heavy item of expense, which should be abated where it is practicable.

TOBACCO BEDS.

These will require constant "nursing." Give them a dressing of fine rotted manure or guano just before a shower, if possible, when the plants begin to show themselves freely, and again after the beds are picked. The operation of "picking" or clearing the beds of grass should not be too long neglected, or slighted when undertaken.

CLOVER AND OTHER GRASS SEEDS.

These should all be sown without delay, if not already done, as heretofore suggested.

THE CORN FIELD.

While South of us Corn may already be planted, the practice as to time varies materially even in Maryland. Many finish in April, while a large number will not plant till May, and are satisfied to finish by the middle of that month. There are considerations which induce to plant early,

sometimes, apart from the welfare of the crop, such as getting the work off hand to make way for the tobacco preparation, or the desire to have it mature early to be out of the way of wheat-seeding, but taking our seasons one with another, the safest planting time is the later period. Our droughts are very certain to be most severe during the month of July, when early planted Corn will be making, and in consequence will very probably be cut short.

PREPARATION.

We advocate always the most thorough preparation in advance of planting. One good ploughing is enough, but the surface preparation of harrowing and rolling should be very ample, and the after working quick. Close planting and early working give the best chance of a large crop, but close planting—we mean as close as 3½ feet each way—is not to be advised unless the whole cultivation is to be made and completed by harvest.

MANURES.

Manures, to be applied broadcast, whether for corn or other crops, should be put upon the ground as soon as may be after ploughing, and mixed in with the surface preparation. And this should be observed as well with commercial fertilizers as stable or other manures. They fail very often for want of water to dissolve them, which the spring rains will furnish. Manure in the hill should be some well rotted compost, or a mixture of rich earth, ashes and plaister, a handful to the hill; manure from the poultry house, with an equal quantity of plaister pounded and mixed together, with a bushel of salt to five of the mixture, a handful to the hill; a table spoonful of guano mixed with double the quantity of dry earth and a little plaister to the hill. Poudrette, well made, answers well for this purpose, and some of the superphosphates; they may be dropped on the corn before covering, or immediately after it is covered. The latter is safest when there is any apprehension of injury from the character of the application.

PLAISTER.

Sow Plaister on clover fields early this month.

HORSES AND OTHER WORKING STOCK.

These all require the utmost care, with good feeding during the early working season.

COWS, EWES AND SOWS.

These, with their young, will now require especial care and good feeding.

ROOT CROPS.

The ground should be got in readiness now for for these crops. The first of May will be time enough to sow main crop, but in the meantime the ground should be deeply ploughed and manured.

## THE VEGETABLE GARDEN.

### APRIL.

We need add little to the hints of last month for the Vegetable Garden. Such of them as have not been attended to, should be no longer neglected. Turn to them at once.

CORN.

Plant early Corn, and repeat every two weeks for a succession.

LIMA BEANS.

Plant Lima Beans late this month on warm, rich soil.

SWEET POTATOES.

Provide Sweet Potato roots and bed them without delay for plants to be set out in May. There is no reason why any garden should be without a supply of this valuable root.

EARLY YORKS.

Level the ridges on which Early Yorks are planted.

RADISHES.

Thin out Radishes and sow seeds at intervals for further supplies.

SALSIFY OR OYSTER PLANT.

Do not fail to sow seed of this excellent root. Cultivate as you would the carrot or parsnip.

TURNIPS.

If desirable a small bed of early Turnips may be sown.

RHUBARB OR PIE PLANT

May be propagated by offsets from the roots.

RED PEPPERS.

Sow seeds of these in a warm border.

## THE FRUIT GARDEN.

Finish planting without delay trees and shrubs of whatever sort. Water when you plant, and occasionally, in dry weather. A good mulch of straw or litter of some sort before summer sets in is very desirable for all newly planted trees.

GRAFTING.

Every young farmer should learn to graft. This is the proper season for it.

GRAPE VINES.

Work well among your Grape Vines, and keep the surface always loose and clear of weeds.

MELONS.

By the middle of the month plant Watermelons and Cantaleupes. Give a full supply of good compost to every hill.

## THE FLOWER GARDEN & LAWN.

If our suggestions of last month were attended to, all trees and shrubs for the Lawn have been well planted. If not mulched with litter they should be watered once a week, if the weather be dry. But the mulch is to be preferred, as it not only keeps up a uniform moisture, but enriches the soil.

THE LAWN

Should be well raked and swept and rolled and if necessary top-dressed with ashes and plaister, or some good super-phosphate.

GRAVEL WALKS

Should be cleaned and rolled—put on additional gravel if required. Make good walks wherever wanted—not less than four feet wide. Dig out and fill with six inches of gravel mixed with earth which will pack well when moist, so that with the roller a fine smooth and dry walk will be made.

ANNUALS.

Most of the Annuals may now be sown in the open border. Plants which have been started in the hot-bed or green house, should be pricked out into pots, boxes or a cold frame, to harden before planting in open border.

VERBENAS, PETUNIAS, &C.

Which have been raised in house or hot-bed, should be removed to cold frame to harden.

ROSE BORDERS AND FLOWER BEDS.

These should all be thoroughly dug and manured with rich well rotted compost.

ROSES

Should be pruned before the buds start—cut well back to cause them to throw out strong young wood.

HYACINTH AND TULIP BEDS.

Uncover these and stir the surface.

SUPPLY OF PLANTS.

In order to insure an ample succession of bloom for the flower beds, be sure to have a full supply of plants protected under glass, to be removed to the beds in time for early summer bloom.—Beside *Roses*, *Verbenas*, *Phloxes*, there are *Petunias*, *Heliotrope*, the scented *Geraniums* and the brilliant *Scarlet Geraniums*. Among the annuals, are the India and China *Pinks*, and all the family of *Carnation Pinks* and *Picotees*, unsurpassed in beauty and fragrance. These, with other summer blooming flowers, will suggest themselves. As we approach the fall months, we have the gorgeous *Salvia Splendens Major*, the *Salvia Patens*, the *Asters*, *Chrysanthemums*, *Dahlias* and *Roses*. If you mean to enjoy the pleasure of such a selection, do not let the season of procuring them escape you.

## THE GREEN HOUSE.

There should be a fine display of flowers this month. Roses, Azaleas, Calceolarias and Cinerarias will form the principal objects of attraction. Syringe freely to keep leaves clean, and maintain a moist atmosphere; fumigate occasionally with tobacco smoke, pick off dead leaves and flowers, and admit air freely during mild weather. Remove all hardy kinds to cold frames.

AZALEAS,

As they start to grow, should be repotted and all straggling shoots cut in.

CAMELLIAS.

As the wood begins to ripen, admit air more freely.

PELARGONIUMS

Will now be in bloom. Give air and water freely.

CALCEOLARIAS,

While in bloom, should be in an airy part of the house.

FUCHSIAS

Will require constant attention, by shifting frequently into larger pots, and pinching back irregular or straggling roots.

GLOXINIAS AND ACHIMENES,

Started last month, if growing freely, will require changing into larger pots.

## Garlic in Milk.

*To the Editor of the American Farmer:*

A correspondent in your February number enquires "the best way to obviate the unpleasant consequences resulting from milch cows feeding on garlicky pastures."

If cows are kept up long enough after feeding upon garlic, before milked, the milk will not taste. Acting upon this, if my cows have calves I let the calves run with the cows during the day and separate them at night and use only the morning's milk; if they are without calves, bring them from the pastures early in the afternoon, and give them hay or other provender that they will eat, and milk late in the evening. It is better to give the cows that are separated from their calves at night, some hay or fodder. By the way, the most successful plan I have ever tried with calves is, to let them run with the cow during the day *for three months*, parting them at night, and wean at the expiration of three months. By this plan the milk maids can't starve them, and will ensure a calf that will go through the winter well, with tolerable care.

L.

## Planting Evergreens.

Transplanting evergreen trees differs very little from deciduous trees. The principal difference is in the *time*. Evergreens should not be planted before the 15th or 20th of March, and if deferred to the first of April the better, and the planting may run into the second week in May. They can be set out with entire certainty even when they have sprouted half an inch. The different spruces, pines, arbor vitæs, &c., will do well where any common tree will grow, and will be better satisfied with poor soil than deciduous trees. But they must be well and firmly planted in a large, carefully prepared hole, and set a trifle deeper than they stood in the nursery, where sometimes they stand very shallow, especially if they have been transplanted there, for quick sales, which is frequently the case.—They should be well staked, that the roots may not be jarred by the spring winds, which make a full broadside charge upon their unshed foliage, while the ground is still moist from frost and spring rains.

The after culture of evergreens is all important. The soil underneath the branches must be often stirred with an iron rake or garden fork, and *no grass or weeds permitted to grow*. Dogs, hogs, chickens, much less cattle, must not be allowed in the enclosure with the trees. Dogs are particularly injurious to young evergreens, and so are chickens which dust themselves in the soft earth beneath the branches. The fine leaves once rubbed off—and this it is easy to do—the branch frequently dies, and none other ever sprouts to take its place.

In selecting evergreens, be particular to take those which are well and uniformly branched down to the ground, and rise in pyramidal form. A dark color and thin branches are always the best.—*Germantown Telegraph.*

## Profits of Poultry Keeping.

I send you herewith a statement of an experiment with fowls made to the Committee of our Agricultural Society in September last, to which was awarded the premium. Although the results were not in any way "alarming," yet they compare favorably with similar statements in point, and show conclusively that fowls can be made quite profitable stock.

STATEMENT.—Account commenced January 1, 1860, and continued six months. Stock, thirty hens and two crowers; the Bolton Grey blood predominating with strains of Black Spanish, Plymouth Rock, Chittagong, Dominique and China, (I find mixed breeds do better than pure bloods.)

They commenced laying soon after the first of the month. The largest yield of eggs in any one month was in February, forty dozen. I see no reason to change my opinion as set forth in my statement of two years ago, that it is more profitable at present prices to raise eggs than chickens, therefore I set only enough hens to make sure of a choice lot of young fowls, as I consider a hen in her prime at two years, and decreasing in value, for laying purposes, after that. I send to market all but one or two of the best crowers, and all of the inferior pullets, during July and August, finding it more profitable to work them off then than to feed till fall.

You will observe that the quantity of grain consumed is large for the number of fowls. This is owing to their being confined almost entirely to a house of 10 by 20 feet, and a yard of 8 by 12 feet. I am safe in saying I should have used one-eighth less grain, and had thirty dozen more eggs, if the fowls had had a free run.

I have underestimated the manure, which I find quite a valuable article. My method is to spread under the roosts every two or three weeks, a few shovelfuls of loam, or better still, *chip dirt*, and what with the scratching of the fowls and an occasional working over with the hoe, I have in the spring a homogeneous mass of excellent fertilizing material.

The plan of *feeding* I have finally adopted is to keep corn by them all the time, giving, for variety, a feed once or twice a week of oats, or potatoes boiled and mashed with meal. For animal food, which they *must have*, I keep them scraps chopped fine, or fresh meat, and furnish them with lime in pounded oystershells.

For *fattening* I know of nothing better than good sound corn, with milk, either sweet or sour, to drink.

| Dr. | |
|---|---|
| To 11¼ bushels of corn at 92 cts. | $10.58 |
| 2 do. oats at 55 cts. | 1.10 |
| 1¼ do. meal at 88 cts. | 1.10 |
| Meat, $1.20; oystershells and pepper, 20c. | 1.40 |
| 10 gallons sour milk at 4 cts. | 40 |
| 1 hen bought, to replace one lost | 50 |
| | $15.08 |

| Cr. | |
|---|---|
| By 152¾ dozen Eggs sold, averaging 18¼ cts. | $27.89 |
| 20 do. used and set av. 18¼ cts. | 3.65 |
| 55 Chickens on hand, worth, average, 15 cts. | 8.25 |
| 6 months' manure | 3.00 |
| | $42.79 |
| | 15.08 |
| Profit of 30 hens for 6 months | $27.71 |

—*Country Gentleman.*

The London Institute contains 60,000 volumes.

[For the American Farmer.]

## Sorrel and Lime Again.

In several of the late numbers of the *Farmer* the discussion has been going on, whether Edmund Ruffin's theory is correct or not, "that lime is a preventative of the growth of sorrel." He seems to think that there must be an acid in the soil where sorrel grows freely, and that lime being an alkali, neutralizes this acid and thus prevents the plant from obtaining a necessary support. How so deep a thinker should have come to such a conclusion is difficult to conceive. By referring to the analysis of organic acids, we find that they are all composed of oxygen, carbon and hydrogen. Starch, sugar and gum are composed of these same constituents, the difference being only that they, as well as the organic acids, are arranged in different proportions, each for its own product. Now as these constituents are all obtainable from the air and the soil, and as each and every plant has the power to arrange these constituents suitable for its own growth, it is easy to perceive that there is no need of an acid in the soil to perfect a plant. Indeed the conclusion would be against it, for all acids existing in soils must be inorganic acids, and these have very different bases from vegetable acids, and are more likely to be injurious than beneficial to plants. We see that in Louisiana the orange and lemon there grow side by side with the sugar cane; sugar and citric acid is there obtained from the same soil, watered by the same rains, and nourished by the same sun and dews. The seed of every plant appears like a little leaven, leavening the materials brought into contact with it into its own nature, and thereby fulfilling the law of its creation in producing its own likeness. The same may be seen here, where acid plants and plants without acid grow side by side.

Different theories are brought forward in opposition to Ruffin's, some of which appear as unscientific as his. I see no reason why lime should destroy sorrel as a plant, but as sorrel will grow on poor soil, it is easy to perceive that the addition of lime in improving the soil, would induce a growth of stronger vegetation that would overgrow the sorrel. Manure will have the same effect. Sorrel grows here on our sandy soils the most freely, and our sandy soils here are our driest soils—hence I consider that "Laburnum's" theory in the last number of the *Farmer*, is as unscientific as Ruffin's. It may grow on poor and wet soil, but not because it is wet, but because other conditions are favorable, and neither lime nor manure on such soils can enrich it to any extent. But underdraining would benefit it in such a way that the lime and manure could act so as to produce a heavy growth, and then the sorrel is overcome. Improve the soil in any manner, and the sorrel will not be in the way.

Another theory of "Laburnum" is contrary to my observation. He says that "you may go into the finest wheat-growing region and cut down a forest of oaks, and a crop of pines will spring up." He may come into the county of Loudon and cut down the forests of oaks, and no crop of pines will succeed, and that for two reasons: first, there is but precious little pine seed here, and they must have seed to come from —and second, there will be too rank a growth of vegetation that will follow such a cutting to allow the plants to succeed. Pine seed is small, and the young plants are small for several years at first, and where a heavy growth takes place they cannot succeed. This is the reason why the old fields of Fairfax county and other counties on tide water have so luxuriant a growth of pines on them. They were cultivated so as to impoverish the soil when but little would grow; this gave a chance for the pine to get a start and not be smothered out. There were a few seed bearing pine trees scattered throughout the country, and the seed being small and having a wing attached, could be carried considerable distances by the wind. In this way pines have sprung up in many parts of Virginia, but not as the natural cause of cutting down the oak timber, as some writers have asserted.

Instances can be seen where the cutting down of pine timber has been followed by the growth of oak, but only, as in the former case, under certain circumstances. The taking away of the large pine timber has given room for the undergrowth of oak, and this having a start of the young pines, will overshadow them and keep them under. I have heard that on the borders of the Chesapeake Bay, where piney land has been kept for many years on purpose for cutting firewood, that there they cut all the timber off and then plant the ground in corn for one or two years, when they turn it out and a thick growth of pines come up, and in this way they renew the growth. Their intention is to kill what oak there is by cultivation, as that timber will sprout from the stump, while pine will not, and the pine seed being plentiful in the ground, the cultivation prepares it for their growth. Thus some land, I have been told, has been cut over several times, and the growth of pine is kept up, that timber being more profitable for wood than oak would be.

I concur with "Laburnum" that pine timber is not a certain evidence of the want of lime in a soil, for in the limestone valley West of the Blue Ridge, pine timber can be seen growing in close proximity to limestone rocks. But my impression is, that such soils, by a more luxuriant vegetation, choke out the young pine plants, rather than by the presence of lime in the soil acting prejudicial to that kind of growth.

YARDLEY TAYLOR.

## The Care of Harness.

Leather is seldom injured by being wet, if hung up to dry, instead of being left in a mass on the floor or in a corner, where the drying is so slow as to create mould. For general use harness should be fairly oiled, and for this purpose either pure neats'-foot oil should be used, or the article known by the curriers as "daubing;" and this should be rubbed in while the leather is moist, but not wet. The harness should be wrapped up in a wet cloth one day before the application of "daubing" or neat's-foot oil; this should be rubbed on smartly with a brush for a sufficient length of time, to insure its entrance into the leather, rather than leave it upon its immediate surface. If the leather be positively dry, this substance cannot enter, and therefore the necessity of its being moist and pliant at the time of application. Varnish should never be applied; it fills pores, and prevents the necessary access of air, causing the leather to become crisp and rigid, and in a short space of time it is rendered tender, causing it to crack, break, &c.—Before applying any oily substance to leather, all dirt should be thoroughly removed from its surface, and no other material than lampblack should ever be mixed with oil, where it is necessary to blacken the leather. Shoe blacking is sometimes used, and always with injurious effect; it frequently contains sulphuric acid, which, when brought in contact with leather, rapidly destroys it. Where the leather is very dry, as with boots and shoes, the injury from this cause is not so great. Vegetable oils should never be applied to harness of any kind, for after a while they harden the leather and destroy its usefulness. Leather curtains should never be varnished, but always kept perfectly pliant by very moderate and frequent application of the oils we have named.—*Working Farmer.*

FAILINGS.—The finest composition of human nature, as well as the finest china, may have flaws in it, though the pattern may be of the highest value.

## Root Culture.

THE CARROT.—The carrot delights in a *deep*, rich, loamy soil, but we have never seen a failure even in sandy soil, where sufficient nutriment was given in the form of well rotted stable manure or guano, and land of a clayey texture will give a large crop, if it is subsoiled and kept well pulverized. Indeed, the effect of a carrot crop in ameliorating a stiff soil, after subsoiling, is wonderful, as any one can ascertain by making the trial.

The common mode of seeding has been in drills, from twelve to sixteen inches apart, and the after culture generally depended upon the hoe. In this manner a greater yield can be obtained per acre than where ridging is followed, but a large increase of labor is demanded. Ridging is performed by turning two furrows together, about two feet apart from top to top; the cultivator can then be freely used, and, compared with the former mode, the toil is light. The use of a drill expedites the work, but with soaked seed, it is a troublesome operation. Plaster, poudrette, ashes, or any dry, fertilizing material, will assist in overcoming this difficulty. Carrot seed should always be put in warm water before planting, and allowed to soak from one to two days. If this was generally done, we should hear of less complaint about poor seed. If the weather proves unfavorable for planting when the seed is thus prepared, coat it with any of the materials before mentioned, set it in a cool place, and it will not receive injury for eight or ten days. Should it become sprouted, no damage will ensue. It will only prove that your seed is good. Carrot seed can be tested by sowing a few in a hot-bed, or in a box in a warm room in the house. Two pounds per acre is the quantity of seed used.

We would not recommend the sowing of carrots until the ground gets warm, so that they can make a quick growth, and thus show themselves about as soon as the weeds. As regards varieties, the Long Orange is most generally raised. It grows to a great length—sometimes, in favorable soils, being two feet long. The White Belgian reaches an enormous size, from four to six inches of its upper portions being out of the ground. It is coarser than the Orange, and not considered as valuable for stock, though giving a larger crop. The Long Red, except in color, resembles the Orange.

THE PARSNIP.—The Parsnip we have long thought is the most valuable of all the roots.—No root is better, and we think none as good, for fattening hogs or cattle, and for feeding milch

cows. It gives no unpleasant flavor to the milk and many think the butter from cows fed with parsnips peculiarly rich and high flavored. Butter made in the winter, where cows receive a good ration of parsnips, is said to be of as fine a color and as excellent flavor as when the animals are feeding on the best of pastures. If this is the case, as we can prove on good authority, those who have been troubled with poor-flavored, lard-like winter-made butter, will unite with us in urging farmers to grow parsnips, for the use of their milch cows, at least. In Europe many thousands of hogs are fattened every year entirely on this vegetable, particularly on the islands of Jersey and Guernsey. The English think the parsnip makes sweeter pork than any other feed, but give ground peas or barley a few weeks before killing, to harden the meat.

Lest our readers should be disposed to think that we speak too highly of this root, we quote the following statements from the best English authority:

"As parsnips contain six per cent. more mucilage than carrots, the difference may be sufficient to account for the superior fattening, as well as butter-making quality of the parsnip. In the fattening of cattle the parsnip is found superior to the carrot, performing the business with as much expedition, and affording meat of exquisite flavor, and of a highly juicy quality; the animals eat it with much greediness. It is reckoned that thirty perches, where the crop is good, will fatten an ox three or four years old, in ordinary store condition, in the course of three months. The parsnips are given in the proportion of about thirty pounds weight, morning, noon and night; the large ones being split into three or four pieces, and a little hay supplied in the intervals of these periods. The result of experiment has shown, that not only in neat cattle, but in the fattening of hogs and poultry, the animals become fat much sooner, and are more healthy than when fed with any other root or vegetable; and that, besides, the meat is more sweet and delicious. The parsnip leaves being more bulky than those of carrots, may be mown off before taking the roots, and given to oxen, cows, or horses, by which they will be greedily eaten."

Another advantage for this country is, that any portion of the crop not wanted for winter use may be allowed to remain in the ground during the winter, as they are not in the least injured by the frost. When dug they should be stored in a cool place, and be covered with earth. The parsnip delights in a rather light, deep, rich soil, though we have often grown good crops on a heavy clay, when dry and well pulverized. If manure is used it should be well decomposed. The carrot and parsnip require similar cultivation, but as parsnips make a stronger growth when young, they are not as apt to be choked by weeds, or to suffer from a little neglect. The plants are much more easily seen, so that weeding is less difficult. Be particular in obtaining fresh seed, as very little of that two years old will grow. Get your seed early, and test it before planting.—*Rural New-Yorker.*

## How to Cure Kicking Horses and Runaways.

The experiments of Rarey, the horse tamer, and the promulgation of his theory of horse training and management, are bringing before the public much useful knowledge upon this interesting subject. Whatever may help to bring the horse, especially vicious horses, as they are called, more completely under the subjection of man without the necessity of resorting to cruel treatment, ought to be known by all who have the management of equine quadrupeds. We heard a day or two since, a description of the taming of a kicking horse and another who was an inveterate runaway, by methods so simple and Rareyish that we cannot forbear to publish them for the benefit of horseologists in general.

If you have a horse that has a habit, when in harness, of bringing his heels in contact with the dasher and damaging the vehicle by kicking, proceed as follows: Place around his neck a band like that used for riding martingale. Then take two light straps, buckle them to the bit on either side, pass them through the neck band and thence inside the girth and strap them securely to each fetlock of the hind feet, taking care to have them of the proper length. When a horse is rigged in this manner, if he attempts to "kick up behind," each effort will jerk his head down in such a way as to astonish him, perhaps throw him over his head. He will make but a few attempts to kick when he finds his head thus tied to his heels, and two or three lessons will cure him altogether.

The method of reforming a runaway is equally simple and effectual. First of all, fasten some thick pads upon your horse's knees, then buckle a strap, about the size of a rein, upon each fetlock forward, and pass the straps through the hame rings or some part of harness near the shoulder on each side and lead the straps back to the driver's hand as he sits in the buggy. He has thus four reins in hand. Start the animal

without fear; don't worry him with a strong pull upon the bit, but talk to him friendly.—When he attempts to run, he must of course bend his forward legs. Now pull sharply one of the foot reins, and the effect will be to raise one of his forward feet to his shoulder. He is a three-legged horse now, and when he has gone on in that way a little distance, drop the constrained foot and jerk up the other. He can't run faster on three legs than you can ride, and when you have tired him on both sides pretty thoroughly, or if he refuse to take his trot kindly and obey your voice and a moderate pull on the bit, you can raise both his fore feet, drop him upon his knees, and let him make a few bounds in that position. The animal will soon find that he can't run away; that he is completely in your power, and by soothing words you will also be able to convince him that you are his friend.—He will soon obey your commands, and will be afraid to extend himself for a run. Within a week or two some horses that were quite valuable animals in respect to everything but their bad habits of kicking and running in harness, were cured by methods described above. The experiments are such as can be made by any person at all accustomed to managing horses, and we hope it may prove serviceable to some of our readers.—*Boston Herald.*

## Sowing Sorghum Seed.

From experiments made in the spring, I learned that the seed should be scalded before planting. One of the greatest difficulties in the cultivation of the cane, has been the fact that it required three to four weeks after planting, before it was large enough to be readily distinguished from grass, during which time the weeds generally become so large as to render its cultivation difficult. This difficulty can be obviated in a great measure by scalding the seed with hot water, letting it stand in the water ten or twelve hours, then pour the water off, and let it stand in a tight vessel in a warm place three or four days till it has sprouted; then plant on newly prepared land, and it will come up as soon as corn, or some ten days sooner than it would if not scalded. It should be planted at the commencement of the corn-planting season, on very rich, warm land, a sandy soil, and should be well cultivated with the shovel-plough and the hoe. —*Prairie Farmer.*

It is a good rule always to back your friends and face your enemies.

## Bone Manure.

Bone manure is universally considered one of the best kinds that can be applied to the land, whether for corn, grass, or root crops, and its extensive and increasing use is a proof of the estimation in which it is held. Not only are the bones of those animals slaughtered in this country employed as manure, but nearly 80,000 tons per annum are imported from foreign countries, chiefly for the same purpose, and yet the supply is by no means equal to the demand. Had not the importation of guano commenced about the year 1840, it is probable that bones would have risen to £10 or £12 per ton.

"That bones must be beneficial as manure," says Mr. Nesbit, in his pamphlet on Agricultural Chemistry, "will appear from a very simple consideration. Animals are fed upon vegetables, and the whole of their bodily structure grows out of the food, or is eliminated and formed from it. If the food did not contain phosphate of lime, the bony structure of the body could not be built up. If the soil in which vegetables grow did not contain phosphate of lime, the seeds of vegetables could not be matured. Supposing the arable land of this country to have been robbed for a thousand years of phosphate of lime, and never to have received any back again; assuming this ingredient to have been continually exported in the shape of milk, cheese, sheep and oxen, it is clear that unless the land had an unlimited amount of phosphate, which we know is not the case, there must have been a proportionate diminution in the quantity of such materials. Hence it is that when certain substances which had been taken out for a long period have been again suddenly applied, land worth hardly 5s. per acre has sprang up to the value of 15s., and there has been an enormous increase of crops."

One of the most valuable qualities of bones is the slowness with which they decompose, and the length of time during which they continue to give out the phosphates. It is found upon analysis that one pound of bones contains as much phosphoric acid as 28 pounds of wheat or of 250 pounds of potatoes. Now, a crop of wheat of four quarters per acre, and reckoning it at 60 pounds per bushel, weighs, in round numbers, 2000 pounds, which contains only as much phosphate as is found in 71 pounds of bones. It is clear, therefore, that if the bones are put on at the rate of 3½ cwt. per acre, supposing them to decompose rapidly and give out the phosphates in proportion, a large proportion would be wasted. But that this is not the case,

as the following circumstances prove. A gentleman, who occupied a large farm in Norfolk, finding, towards the close of his wheat-sowing, that he was likely to have a considerable quantity of bone-dust left, if he continued distributing it at the ordinary rate, directed his foreman to increase the quantity. On going to the field the following day he found that the man had *doubled* the allowance, and that instead of having any to spare, he would not, at that rate, have enough to finish manuring the remaining seeding land. He therefore told him to go back to the usual quantity of about 4 cwt. per acre, at which rate the field was finished. The crop of wheat proved a very heavy one, as well as the succeeding crop of turnips, on that part of the land which was doubly dosed with bone-dust. Now mark what follows. *Eleven years after*, the farmer on riding with a friend over his land, came to this field, which was again, for the third time after the above occurrence, under wheat. On entering it, he requested his friend, if he should, in riding down the furrow, find any difference in the growth of the wheat, to point it out. After riding a few yards into the wheat he suddenly stopped. "What in all the world have you been after here?" he exclaimed. "This wheat is six inches higher, and as stout again as the rest; how came this to pass?" The farmer then explained to him the occurrence we have related, and which proves not only the value of bones as a manure for a single crop, but that by the deliberate manner in which they give out the phosphates in decomposition, they possess a more permanent value than any other kind of manure.

But bones are not only valuable on account of the phosphoric acid they contain; they also contain nitrogen in the proportion, according to some chemists, of six, and of others, of four per cent. As the bones decompose this becomes ammonia, the value of which in manure is now well understood by almost all agriculturalists. The conversion of bones into superphosphate of lime by the addition of sulphuric acid, by precipitating the decomposition, probably alters the conditions, by causing the immediate distribution of the phosphoric acid in the sod; and thence it requires a less quantity to be applied to the land to produce a crop.

The Americans have adopted a new method of dissolving bones, which may probably be employed to advantage in this country, as the bones will not require to be ground. A ley is made with lime, in the proportion of one bushel of lime to sixty gallons of water. To 200 pounds of bones put 60 gallons of this ley, and boil them for a few hours until the bones are dissolved, when they may be reduced to a dry powder, and applied in the same way as guano, or any other artificial manure. This mode of application has been found to produce very satisfactory results. The lime used was made of oyster-shells, as the best for the purpose. "It has been repeatedly demonstrated," says an American writer, "that one bushel of dissolved bones, *for immediate effect*, is equal to five times as much ground bones; in other words, that one pound of *nascent*, or soluble phosphate of lime, is worth more than five pounds of *normal*, or natural phosphate of lime, or bone earth."

This economic application of bones is becoming more and more common, being cheaper, and involving less labor, and the result is quite as certain and as good. The only difficulty in the purchase of bones, in whatever form, is that of getting them genuine, on account of the adulteration with *scutch*, or the refuse of the tanpits, oyster-shells, and other cheap ingredients, the proportion of which in bones is regulated, with some dealers, by the price paid per ton. We have known as much as fifty per cent. of scutch mixed with bones, as agreed on between the merchant and his customer, a country bone crusher. —*London Farmer's Magazine.*

## Colic in Horses.

Colic in horses is a very common disease, and if taken in time may be easily cured in most cases. It is not unfrequently confounded with inflammation of the bowels, but is easily distinguished as follows: Colic has no increase of the pulse, which is not over fifty a minute; the animal often rolls; the disease intermits, and there is but little fever. With inflammation of the bowels there is much fever; the pulse is sometimes a hundred a minute, the attack is gradual, and the disease does not intermit.

When colic arises from bad food, a pint or so of a solution of saleratus will often afford entire relief. As it assumes more of a spasmodic character, peppermint and ginger may be added.—We have used with entire and immediate success a small spoonful of saleratus, the same quantity of ginger, and a teaspoonful of peppermint, added to a pint of nearly boiling hot water, and given from a junk bottle. Powdered charcoal is one of the best and safest medicines for any disease resulting from derangement of digestion—and two or three ounces or more mixed with water, may be given at any time with great advantage.

Inflammation of the bowels is generally increased by irritating medicines. A drink of slippery elm, hourly, and giving the horse but little food, and letting him rest, is safe treatment. —*Exchange.*

## "Shallow Ploughing—The Great Error in American Agriculture."

We continue—as promised in our last—the extracts from the pamphlet of Thomas Moore, of Montgomery county, on the topic above stated. This extract contains the reasons in favour of deep ploughing:

"I shall next enumerate some of the good effects to be expected, and which are constantly experienced by a *contrary* practice, viz: *deep ploughing*, when judiciously pursued; and then endeavor to prove the futility of the arguments adduced in favor of shallow ploughing.

In the cultivation of plants, three things are particularly necessary: First, that sufficient *pasture* is prepared for their roots; secondly, that the soil abounds with proper *aliment*, and thirdly, that *moisture* be duly administered, in neither *too great* nor *too small* quantities. That *deep ploughing* is calculated to promote these ends, I believe will not be hard to prove, particularly the first and third.

The quantity of earth operated on being great, it very seldom if ever happens that any fall of rain is so great as completely to *saturate* it; and until that effect takes place, or nearly so, very little change is to be expected in the disposition of its parts; and therefore when the redundant moisture evaporates, it leaves the soil as it found it, except a small crust on the surface: the succeeding ploughings, instead of being applied to repair the injury the soil has sustained by great falls of rain, go to the further pulverizing and opening it suitably to receive the capillary vessels of the plants. Thus the pasture becomes not only *more extensive*, but far *better* adapted to promote the growth of plants.

With respect to *aliment*, naturalists differ widely in their judgment respecting its nature and composition; my opinion is, that the food of plants has not yet been fully ascertained by any. This, however, we all know, that manures of all kinds contribute in some way or other to the growth of plants; whatever may be their food, I will not pretend to say that it is communicated to the soil by the mode of cultivation under consideration; but this I will say, that it is far better calculated than the contrary practice (shallow ploughing) to retain the quantum originally found therein, or afterwards applied to it; and further, if dews are nutritive, the superior openness of the texture in this mode, qualifies it to derive every advantage to be expected from that source.

But perhaps the most valuable of all the effects resulting from *deep ploughing* is, that it in a great measure preserves an equal quantity of moisture in the soil; for as we seldom have a rain so great as to produce an unhealthy stagnation of water about the roots of plants set in a soil seven or eight inches deep; so on the contrary we scarcely ever have a drought of so long continuance as to extract all the moisture to that depth; for it is to be remembered, that after a few inches nearest the surface, moisture is extracted by slow degrees: thus, for instance, if it requires one hot day to dry the first inch, probably it will require three for the second, six or more for the third, and so on, perhaps nearly in geometrical progression.

Thus it appears from the foregoing observations, that by this mode of practice the great loss sustained by *washing*, an evil so much to be dreaded in this country, is avoided; that whatever manures are applied, are safely deposited, and will act with full effect; that the growing plants are abundantly supplied, during the whole of their growth, both summer and winter crops, with an open soil, for a free extension of their roots, and also with a regular supply of moisture; so that their growth is at no time impeded by any small irregularity of season; the depth of soil being to them, with respect to wet and dry, what the ocean is to small islands, with respect to heat and cold; the means of a tolerably regular temperature.

I can readily anticipate the remarks of our sticklers for old practices, on what has been advanced. This reasoning (say they) well applies to rich deep soils; but in poor shallow soils, 'let him beware of the *yellow clay*, the *dead earth*, lest the value of his land proves to be the price of his too adventurous experiments.' But let me ask them, have they never seen the effects of earths taken out of cellars and wells, when applied to poor land? Have they never observed the luxuriant growth of grass and weeds, at the edge of a bank, taken from a mill-race, or large ditch, and frequently on the very top, when flat enough to retain moisture? For my own part, I have long been in the habit of observing these things, and do not recollect that I ever saw any earth taken from a considerable depth below the surface, which was capable of being pulverized by frost or tillage, without evident advantage, even when clay has been applied to clay, and sand to sand. Seeing this is the fact, is there any good reason for supposing that, as we ascend toward the surface, such a difference will be found in the properties of the earth, that this will render the same land sterile, that the other will enrich? I confess I see none; I cannot even

see why we may not with propriety suppose that the first six inches of earth next below the usual ploughing, should be possessed of all the fertilizing qualities, that the same kind of earth would be, if found six feet below.

It would seem then, that by this mode of cultivation (deep ploughing) on exhausted lands, the quantity of soil would not only be increased, but actually enriched. On lands covered with two or three inches of rich mould, it will probably have a contrary effect in some degree, yet even in this case, the advantages resulting from an increase of quantity, will be found abundantly to overbalance the small abatement in quality.

Their prejudices, in all probability, have proceeded from injudicious experiments; very few planters break up ground in the fall; in the spring their teams are often weak, and were they disposed to plough a spot deeper than usual, would very likely choose to do it when wet, on account of its being easier performed; soon after which the crop is to be planted or sowed, which proves the worse for the experiment, and the planter is disgusted with the practice: he informs his neighbors of the ill success of his experiments; and perhaps a whole neighborhood is thereby afresh confirmed in their former belief that the good old way is best—to plough as deep as they find black soil, and no deeper.

Ploughing land that contains a considerable portion of clay, in a state *too wet* to break, as the furrow leaves the plough, is thereby rendered more compact; and when hardened by the sun, becomes entirely unfitted for the production of vegetables, and is scarcely to be reduced by any succeeding tillage during the same summer; indeed, I believe nothing short of a *winter's frost* will effectually *pulverize* it. The best devised system of practice may be rendered entirely abortive by being put into the hands of unskilful practitioners to execute.

Lands that are to be ploughed much deeper than usual, ought to be broken up in the fall; and would be the better to be ridged, and more surface might be exposed to the frost. If omitted till spring, it ought to be done as soon as it becomes dry enough to break freely before the plough. No crop should be put in that season that requires to be seeded before it can have several ploughings and harrowings at proper intervals; otherwise the expectation of the cultivator will probably be blasted.

If, notwithstanding what has been advanced, I should be called upon for proofs—should be told that the evils complained of on one hand are, in a great measure, ideal; and that the advantages proposed on the other, are theoretical, and remained to be confirmed by practice. With respect to the first, it would, perhaps, only be necessary to say—what further proofs need we, to convince us that the practice of agriculture, particularly in the Southern States, is miserably defective, than the deserted old fields that so frequently present their disgusting surfaces from Susquehanna to Georgia? Some years ago I was of opinion that this speedy reduction of soil was altogether occasioned by the nature of the crops cultivated thereon; but, on attending more accurately to the subject, I am of a different opinion, and believe, as I have already said, it is more from the *manner of cultivation* than from the *exhausting properties* of the crops; of this, one thing has tended to convince me: I have observed that when an industrious person, from another state or country, when the cultivation is generally *deeper*, has settled on these exhausted lands, that they frequently improve for some years; although the *same crops*, or those equally as *exhausting* are cultivated; and instances I have known of some of these old fields becoming very productive without manure."

## On Soundness in Horses and the Purchase and Sale of Horses.

That horse is sound, in whom there is no disease, or any alteration of structure in any part, which impairs, or is likely to impair his natural usefulness. That horse is unsound, that labors under disease, or that has some alteration of structure, that interferes, or is likely to interfere with his natural usefulness. (The term *natural usefulness*, must be borne in mind.) One horse may possess great speed, but no endurance; another may endure much, but can only go at a snail's pace. A horse may be a habitual stumbler, and be liable to break the neck of the rider; another may be of an irritable constitution and a washy make, and lose his appetite and scour, as often as he does a little extra labor. The term unsoundness cannot be applied to either of these. The buyer can discern, or ought to know, whether the form of the horse is likely to render him suitable for his purpose; and he should try him sufficiently to ascertain his natural strength, endurance and manner of going. Unsoundness, we repeat, has reference only to disease, or to that alteration of structure which is connected with, or will produce disease, or lessen the usefulness of the animals. These principles will be best illustrated by a brief consideration of the usual supposed causes of unsoundness.—*Ohio Farmer.*

## Treading Down Fresh Sown Grass Seeds.

It is well known to practical farmers—to which class, we may remark by the way, we have belonged for more than thirty years—that it is frequently difficult to get very small seed, as for instance, *Agrostis vulgare* or common red top, to catch or germinate, when sown on old sod with little or no loose surface mold. The plan detailed in the "Country Gentleman" of December 25th, is effective, though it requires considerable time. As all progress requires change in some sort, I am constantly reviewing suggestions for improvement, my own generally getting *first* examined and tested. In a few days I am going to carry out another idea arrived at from abstract equally as from practical considerations, for it requires the theory of sowing seed, as much as of building a barn.

Wishing to drive out the coarse grass from fifty acres of the driest of my marsh, and improve it for grazing purposes, I shall sow on about ten quarts of red top seed per acre, when the frost is out about three inches, and while the surface is quite soft. Usually I have dragged the surface twice or more, *before* seeding, and then sowed *before* a heavy rain, leaving the latter to beat the seed down and make it stick to the surface dirt—not mold then—exposed by dragging. But the seed comes up patchy when sown in this way, probably because the drag only exposes the soil very partially, leaving dead grass, moss, &c., in smaller or larger quantities, so raised as to leave the seed that falls on it considerably above the general surface; and which, therefore, must dry, after swelling from wetting, and thus spoil, or in part be washed away, if the ground has only a little inclination. Rolling will not press seed thus lost to the surface, because the knobs and bunches keep the roller itself too high up. Brushing is the most usual, and probably the most effective mode. But it must be obvious, if we look closely into the matter, that the best arranged brush harrow will *not press* the seed against the dirt or mold, over more than half the space comprised in any given pasture or area, unless it be more even than pastures generally are—every little knob or hillock causes either brush, harrow or roll to miss or pass *over*—not upon—the space round about it; and the small places thus missed, if duly estimated, will be found to comprise about half of the entire surface. To provide a remedy for this defective seeding, has been for several years an object of interest to me, and now I think I have "theorized" and found one.

Twenty-five years ago, I remember one Edward Pensham, a successful farmer residing near my father's farm, frequently sowed soot, clover seed, &c., on his winter wheat, generally in March, *treading* it in by driving cattle and sheep, pell-mell, over and over it, till the surface had pretty much all been trodden. On moist soils, that would knead under the tread of heavier cattle, he trod with sheep alone. His soil was cold, springy, and rather thin, but the treading seemed to secure good catches of clover, and was evidently very beneficial to *wheat*, by preventing the mold from blowing, or otherwise leaving the roots bare, in the earliest and most important part of the season of growth.

In walking about a field with a cloddy surface, animals step most frequently in the lowest places, thus pressing down the surface of the space which the roll or other implement would miss. But animals often carry their feet low, and drag or trail them along, breaking down the moldy surface into low places, the amelioration thus, and by treading the lower levels, being pretty nearly complete.

The harder surface of dry marsh land, or old pastures, as compared with that of a wheatfield, indicates at once the greater necessity for *pressing* the grass seed well to the surface in the lowest places. Not only because these are missed by other processes, but that while these comprise not less than half the surface—they certainly are and will continue more moist, and therefore offer greater facilities for the seed to grow, than the higher levels, knobs and hillocks.

In a few days I will put this plan in practice, with three horses and thirty head of cattle, when the ground is moist enough to *knead*—conceiving that some of the advantages which may reasonably be expected to accrue therefrom, will be that full three-fourths of the surface, and the same proportion of grass seed, will be trodden, the latter down and partially into the soil. That those parts which are least favorable to germination will be trodden most, and therefore will get a stand when they otherwise would not—that this process will neither bring nor leave in heaps any rubbish or seed; wasting less, therefore, and placing more where it will probably grow. That it can be carried out when the surface soil is too wet to drag or brush with the least effect, but is nevertheless in a good condition to secure the adhesion of the seeds to the soil, as a necessary preliminary to its vegetation, and that as much if not more seed and soil can be brought into the necessary degree of contact by this simple means, as by the incomplete and sometimes disagreeable

method of dragging, and brushing and rolling, or either of them, in the same period of time. For these reasons I shall try treading it in with some confidence.—*Country Gentleman.*

## Carrying Strawberries to a Distant Market.

C. S. Dod, of Jackson, Tennessee, states, in the *Horticulturist*, that last year he sent strawberries from Jackson to Chicago, a distance of 474 miles, by railroad, and the result was "entirely satisfactory, the fruit arriving in perfect condition; time, thirty hours." They were sent in the following manner:

"The fruit was picked very carefully into pint tin cups, the depth of which was equal to the diameter. The cups were placed, not on the bottom of the chest, but on a false bottom, which played freely in the chest, and rested on four or six spiral wire springs, such as are used for making spring mattrasses, and costing a dollar per dozen. The number of springs was varied according to the weight of fruit packed in. The chests were made of such dimensions as to receive just so many cups each way, so as to allow barely a free play, with no extra room for jostling; on the top of the first tier of cups, narrow and thin strips of wood were laid, and another tier piled thereon, so in succession for four or five tiers. On top of the whole rests a vessel or box for holding ice, four inches deep, and of the same length and width as the false bottom. This is made of wood, except the bottom, which is of common stove-pipe iron, nailed to the wood and secured against leaking by white lead. In the top is a hole for introducing the ice, with a close-fitting cover. This box, with its charge of ice, rests on the topmost tier of cups, and rides with them on the springs. A lid, with hasp and paddock, shuts down over the whole. To prevent rude handling, stout trunk-handles are placed on the ends of the chest. A better arrangement than this could not be desired. The whole load danced to every touch, and the fruit was relieved of all jolting. No air-holes were found necessary, but appeared rather to be injurious on trial. If the cups would bear covering with a tin cap, like a mustard box, or a blacking box, it would better guard against any accidental overturning of the chest. Mr. Peabody says the fruit will speedily spoil, if thus confined. With ice I do not believe it will; but this remains to be tried. The liability to loss by careless handling, tilting, and upsetting the chests, was the only difficulty experienced."

## What is the Best Time to Shear Sheep?

Will some of our experienced subscribers give us their views on this subject? The time indicated in the following article seems very early. —Editor Farmer.

"What we wish to know is, whether early shearing is really a benefit or an injury to the animal? Now, how are we to ascertain the fact, unless we make the experiment? How is it with your correspondents that have written upon the subject? How many of them have ever practiced early shearing, and what is their verdict? Have they found it detrimental or beneficial to the sheep? If my memory serves me right, in every instance where the experiment has been tried, and the result has been published, they all agree in one point, viz: that early shorn sheep thrive the best. What I would wish to be understood by early shearing in Vermont is, to shear about the 1st of May, or say from the 25th of April to the 10th of May; in Ohio, we would say ten days earlier.

Mr. Aylsworth, in his communication upon the subject, disapproves of early shearing "from feelings of humanity." He tells us "there must be a great amount of suffering in a flock of sheep which have been deprived of their coats of wool in April, or early part of May, for some of them will die, and others tremble like an aspen leaf, if they are not snugly housed during cold storms and chilly winds in April, and even in May, in this latitude." So they will; and so they will if the shearing is delayed until the middle or last of June. We do not propose to shear and turn sheep out to the mercy of the weather; neither will any "merciful man" do it in June. We expect to house them from all storms and chilly nights, for the first two weeks after shearing, after which time *no storm* can injure them if they are in good condition.

We shear early for the very same reason that Mr. Aylsworth gives for shearing late, viz: "feelings of humanity;" (and we may add interest.) We claim that the change is no greater, and that the sheep will not feel it any more to take its fleece the 1st of May, than to let it wear it until June. We think it is wrong to compel the poor animal to wear its winter clothing through all the hot weather of May and June.

We shear early from the fact that from several years' experience, we have found that sheep thrive better, and will clip annually a little more wool than when shorn late. It may be asked, 'Why sheep shorn early will clip more wool than late shorn sheep?' My answer to this is, that

an Allwise Providence has so constituted every thing, animals as well as human beings, to adapt themselves to the circumstances in which they are placed. Hence, when the weather becomes warm, and the fleece becomes burdensome, nature goes to work to throw off this unnecessary amount of clothing. The first indication of this will be seen on the belly, then the legs, and about the face, and it is not an unfrequent thing before shearing time to see an animal nearly naked. On the other hand, if the sheep is shorn early, they, for a while, require more protection, and nature brings every power into exercise to supply the demand.

The only objection that is made is, that wool-buyers are afraid to buy unwashed wool, and will sometimes take the advantage of them. If it was not for this reason, and one more, which I have not space to mention in this article, washing sheep would soon go out of practice in this vicinity.

We consider it a foolish practice to wash sheep, no matter whether the shearing is to be done early or late."—*Ohio Farmer.*

## Is the Potato Crop Benefited by Manure, on Good Soil?

At a meeting of one of our Farmers' Clubs, in this county—the subject of "Fertilizers" being under discussion—a member remarked that he had frequently used *plaster*, with good effect, upon his potato crop. This remark brought out the following statement from Benjamin Hickman, one of the best practical farmers of Chester county.

"The potato crop does very well on poor land aided by manure; but on *good* land potatoes come earlier and grow to a larger size *without* manure. Land may be too rich for potatoes—has known the tops to grow thirteen feet in length upon a new rich piece of land that has been manured, and only yielding potatoes the size of a hickory nut."

Now, then, Mr. Editor, if it is a fact that "potatoes come earlier and grow to a larger size on good land *without* manure," it is not generally known, and is undoubtedly an important piece of information. In this section of our State—in such counties as Montgomery, Delaware, Chester, &c.—a large proportion of the soil may be safely called *good*, and yet in these counties many thousands of dollars' worth of manure is annually applied to this crop, which must be set down as a great waste of money, if Mr. Hickman's theory is correct. At any rate, the subject is worth investigating,—and as the season for planting will soon be at hand, I would like some of the readers of the *Telegraph* to test the matter fairly, and report the result through its columns.

At the same meeting, and somewhat in confirmation of Mr. Hickman's statement, two other members, Lewis P. Hoopes and Amos H. Darlington, remarked, that on good soil manure was injurious to the sweet potato crop—tending to make them watery and tasteless, without increasing the yield. Knowing from personal observation that these gentlemen have been very successful for many years past in raising sweet potatoes, and as they use no manure at all in the cultivation of this crop, the question naturally presents itself, why may not a good crop of *Mercers* or *Peach Blows* be produced under the same treatment?—*Cor. Ger. Tel.*

## Rolling Grass-Land.

*Messrs. Editors:* Is the importance of rolling grass-land in the spring regarded with as much attention as it deserves? I think not. In the spring of 1848 I rolled grass-land for the first time, merely as an experiment. The previous winter had been very unsteady, the ground freezing and thawing frequently. As a natural consequence, the roots of the grass were in many situations heaved up by the frost.

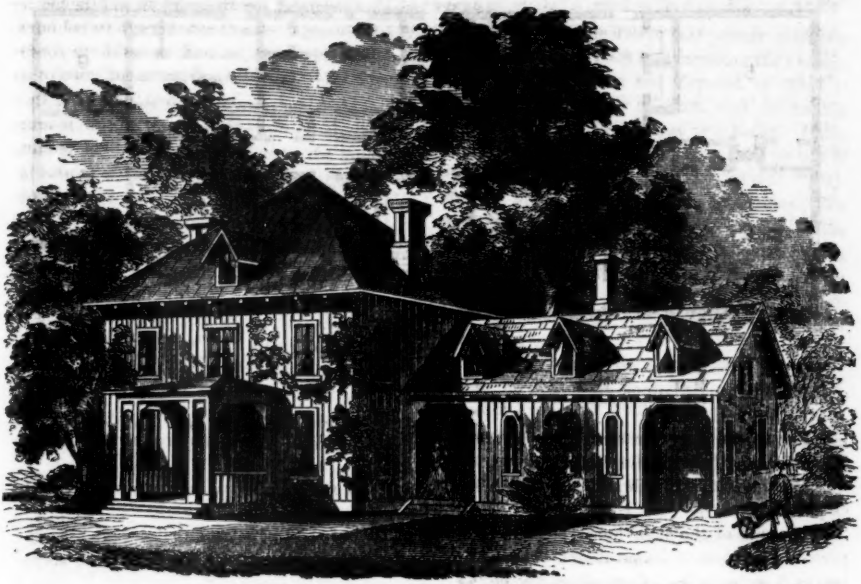
I rolled a strip of land about twenty rods wide, through the middle of a fifteen-acre lot. The land was all in the same condition, yet on the part that was rolled the grass started earlier and produced much more hay. In this instance, there was a spell of dry weather of two weeks duration after the land was rolled. Since then, I have practised, to some extent, rolling my grass land, and have always received benefit from it, though more in some seasons than others.

By rolling, the earth is pressed upon the roots of the grass, so that they receive what moisture there is. On the same principle, when we plant corn in a dry time, we strike the hoe upon each hill, that the corn may receive sufficient moisture to make it germinate.

I am a believer in the utility of experiments, and there is no way, in my opinion, that farmers can so greatly benefit themselves by, as in carefully conducting experiments relating to the various operations of the farm. ST. LAWRENCE.

We have often seen great benefits from rolling grass-land, as described, and agree with our correspondent, that it does not receive the attention it deserves.—*Boston Cultivator.*

Every man complains of his memory, but no man complains of his judgment.



DESIGN FOR A COMPLETE FARM-HOUSE.

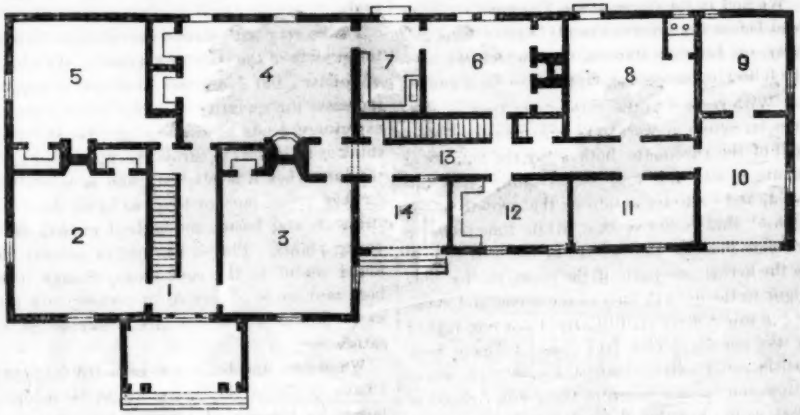
We present our readers with another of the natural (and truthful, because natural) designs, many of which we have presented in our pages. What we mean by *natural*, is, that the artist so mingles the work of his own hands with the works of nature, making the blending so graceful and harmonious, that a true taste is never offended by its contemplation. Indeed, his pictures look as though they *grew*, rather than that they were made!

The artist will be kind enough now to step forward and explain his own beautiful design in his own language:

"When we speak of a *complete* farm-house, our country friends fancy to themselves a dwelling that shall contain every convenience necessary for the carrying on of the household portion of the farm labor; at least, such is the idea we have of it, and in the composition of the present design, we have endeavored to supply those conveniences.

There is nothing at all showy about the house, either in design or plan; it is a plain, substantial farm-house, nearly square, with a large L on one side—our aim having been to insure convenience even at the expense of ornament—though, we think, after the house has become two or three years old, and brightly flowering vines begin to cover its sides, and trees to throw their shadows upon it, that it will have a cosy, comfortable, home-like appearance, quite in contrast with the *shingle palaces* of late so fashionable among us.

Our plan comprises the following accommodation: No. 1, hall 7 feet 8 inches by 19 feet, opening into No. 2, parlor, 15 feet by 16; No. 5, bed-room, 15 feet square; No. 3, living-room, also 15 by 16 feet, opening into a back entry; No. 13, and across it into the kitchen, No. 4, 15 feet by 20; this kitchen contains two large closets and connects with a pantry, No. 7, which measures 7 feet by 10, and is fitted up with a sink and shelves. The next room *en suite* is the back kitchen and wash-rooms; it contains two closets, a large oven and boiler, and measures 16 feet by 12; it opens into the back entry, through which we pass to the wood-room, No. 8, 14 feet by 15; No. 10, carriage shed, and No. 9, work shop. The back entry is 4 feet wide, and contains stairs to the chambers and cellar. On the front, doors open into the dairy, No. 11, 7 feet by 14; the store-room, No. 12, 7 feet by 13, and upon the sheltered porch, No. 14.




The second floor contains eight chambers, besides bathing-room, dressing-rooms and closets. The attics may be left unfinished.

*Construction.*—This house may be built of wood, and covered in the common manner with clapboards.

The roof of the main house projects 2½ feet, and that of the L, 1½ feet; the cornices are supported in brackets 3 inches thick. The windows and doors, inside and outside have plain architraves, 5 inches wide. Cost, about $3,500."

**Meteorological Observations** *kept at Schellman Hills, Carroll Co., Md., Sykesville P. O.,* FEBRUARY, 1861. (*Reported for the American Farmer.*)

| DAY | THERMOMETER. | | | | WIND. | | | RAIN | REMARKS. |
|---|---|---|---|---|---|---|---|---|---|
| | 7 A. M. | 2 P. M. | 9 P. M. | D'y Mean. | 7 A. M. | 2 P. M. | 9 P. M. | Inch's | |
| 1 | 15 | 34 | 32 | 27 | N.E. | S.E. | E. | ..... | Clear; cloudy; 11 30 A. M. hail, end 12 noon; |
| 2 | 43 | 53 | 45 | 35½ | S.E. | S. | S. | 1 | Rain; end 6 P. M.; cloudy. [rain 6 P. M. |
| 3 | 35 | 36 | 31 | 32 | N.W. | N. | S. | ..... | Clear; cloudy; snow during the night enough |
| 4 | 25 | 43 | 28 | 25 | W. | N.W. | S.W. | ..... | Cloudy; clear. [to whiten the ground. |
| 5 | 23 | 43 | 33 | 33 | W. | W. | N.W. | ..... | Clear; cloudy. |
| 6 | 27 | 42 | 33 | 34 | S. | S. | S.W. | ..... | Clear. |
| 7 | 34 | 25 | 5 | 21½ | S.W. | W. | N.W. | ..... | Clear; terrific storm of wind from 12 noon; it |
| 8 | †5 | 16 | 12 | 7½ | N.W. | E. | E. | ..... | Clear. [blew a gale all night. |
| 9 | 15 | 33 | 30 | 26 | E. | S.E. | S.E. | ..... | Cloudy; clear; cloudy. |
| 10 | 30 | 53 | 45 | 46 | S.E. | S. | S.W. | ..... | Fog; clear; cloudy. |
| 11 | 43 | 54 | 50 | 49 | S.E. | S.E. | S.E. | 1 | Cloudy; 6.30 P. M. began to rain, end 6 A. M. |
| 12 | 46 | 59 | 43 | 49½ | W. | W. | S.W. | ..... | Cloudy; clear. |
| 13 | 36 | 56 | 35 | 42½ | W. | W. | S.W. | ..... | Cloudy; clear. |
| 14 | 35 | 46 | 40 | 40½ | N. | E. | E. | ..... | Clear; cloudy; rain began 9 P. M., end 12 noon. |
| 15 | 45 | 53 | 40 | 46 | N.E. | W. | W. | 1 | Rain; clear. |
| 16 | 28 | 53 | 40 | 40⅓ | W. | E. | S.W. | ¼ | Clear; rain 6.30 P. M., end 8.30 P. M. |
| 17 | 33 | 35 | 30 | 32⅓ | S.W. | W. | W. | ..... | Clear; cloudy; clear. |
| 18 | 28 | 41 | 27 | 32 | W. | S.W. | N.W. | ..... | Clear. |
| 19 | 23 | 40 | 33 | 32 | S.W. | S. | S.E. | ..... | Cloudy. |
| *20 | 35 | 45 | 33 | 38½ | W. | W. | S.W. | ..... | Cloudy; snow in the night—1 inch. |
| 21 | 32 | 40 | 31 | 34½ | W. | W. | W. | ..... | Clear. |
| 22 | 28 | 45 | 40 | 37⅓ | W. | S. | S. | ..... | Clear. |
| 23 | 40 | 66 | 55 | 53½ | S. | S. | S. | ¼ | Cloudy; showery from 4.30 P. M. until 12 at |
| 24 | 44 | 33 | 23 | 33½ | W. | N.W. | N.W. | ..... | Clear. [night. |
| 25 | 19 | 40 | 33 | 27½ | N.W. | S. | S.E. | ..... | Clear; blue birds very merry; first appearance |
| 26 | 34 | 50 | 46 | 43½ | S.W. | W. | S.W. | ..... | Clear. [of robins. |
| 27 | 37 | 63 | 46 | 48½ | S.W. | E. | N.E. | ..... | Clear. |
| 28 | 40 | 67 | 57 | 54⅓ | S.W. | S.W. | S.W. | ..... | Clear; first cry of the frogs; any quantity of |
| 29 | .. | .. | .. | ..... | ..... | ..... | ..... | ..... | [flies. |
| 30 | .. | .. | .. | ..... | ..... | ..... | ..... | ..... | |
| 31 | .. | .. | .. | ..... | ..... | ..... | ..... | ..... | |

*1 inch Snow fell. †5° below Zero. Monthly Mean, 36¼. 3⅛ Inches Water fell.

HARRIET M. BAER.

## Sulphate of Lime or Gypsum.

We find in the *Germantown Telegraph* an essay read before the Chester County Agricultural Society, on Lime as Manure, from which we take the following extract on Gypsum.—Ed. Farmer.

"With respect to the sulphate of lime or gypsum, its action appears to be more restricted than that of the carbonate, both as to the number of plants to which it may be advantageously applied, and as to its action on the growth of the plants; that is to say that, while lime seems to increase the size and weight of the seed as well as the herbaceous parts of the plant, plaster adds vigor to the growth only of the leaves and stems —and this is more particularly the case in regard to the cereals. This fact seems to have been satisfactorily established in France. A warm discussion having arisen in the neighborhood of Paris as to the value of plaster as a manure, the government thought proper to refer the question to the Royal Central Agricultural Society. The Society selected some forty or fifty farmers, men of more or less education and intelligence, who had been personally occupied in agricultural for twenty years, and to each of them they addressed a series of questions. The result of the information thus collected was reported to the Society by M. Bose. A few of the questions were as follows:

1st. Does plaster act favorably on artificial meadows? Of forty-three opinions given, forty are in the affirmative, and three in the negative.

2d. Does it act favorably on artificial meadows, the soil of which is very damp? Ten opinions given, unanimously, No.

3d. Will it supply the place of organic manure, or will a barren soil be converted into a fertile one by the use of it? Seven opinions given, unanimously, No.

4th. Does gypsum sensibly increase the crops of the cereals? Of thirty-two opinions given, thirty are negative and two affirmative.

Taking the evidence here adduced as reliable and satisfactory, which I am entirely disposed to do, I think we may draw therefrom these inferences: In the first place that the extent to which the action of plaster is beneficial is limited —the grass crops generally being improved by its use, but the grain crops not. Secondly, that it is money thrown away to plaster poor land until we have enriched the soil, as the inorganic manure must have an organic one with which to interchange its elements before it can become food for plants. It is a custom more or less prevalent to throw a little plaster on the Indian corn when an inch or two high, and I believe it is supposed by some persons to increase the crop of grain.

I have very little doubt that plaster promotes the growth of the stalk and increases the amount of fodder; but I am not disposed to think it increases the quantity of grain, and my limited experience tends to confirm this belief. I also think it is better to throw the plaster on top of the corn when it is planted, than to wait till after it is up an inch or two; as by so doing you stimulate and hasten the earliest growth of the young plants. Plaster has not in general been found useful to the root crops, though it has been said to be of service to turnips, and more so to potatoes—the evidence, however, is not satisfactory.

When peas and beans are intended for fodder, I have no doubt the haulm would be much enlarged by the use of plaster; but when these legumes are intended for the table, plaster should never be used, as the seeds assimulate this inorganic substance sufficiently to become hard on boiling. The gardener may tell you the season has been unfavorable, but it is the plaster he put in the bed, nevertheless.

Liebig says: 'The carbonate of ammonia contained in rain water is decomposed by gypsum in precisely the same manner as in the manufacture of sal ammonia, soluble sulphate of ammonia and carbonate of lime are formed; and this salt of ammonia possessing no volatility, is retained in the soil.' Now, it occurs to me that the farmer who occasionally scatters a little plaster over the manure in his barnyard, to hasten, as he says, the decomposition of the straw and cornstalks, (upon which in fact it has no effect whatever, it being well established that plaster has not the least power to promote the decomposition of either animal or vegetable matter,) is nevertheless doing himself an essential service that he does not dream of. For we know that the ammonia generated in the dung heap, is in the form of a carbonate, which is extremely volatile; if, then, by the addition of plaster, the sulphate of ammonia and the carbonate of lime are formed through the interchange of constituents, as stated by Liebig, our farmer has accomplished with the least possible expense and trouble what is considered as of the utmost importance in the treatment of our barnyard manure, namely, *to prevent the escape of ammonia.*

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A Belgian, of Ghent, has discovered that the rusting of nails employed to fasten the branches of fruit trees to walls can be prevented by knocking into the wall, at the same time as the nail, a small piece of zinc.—*Ex.*

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## HOUSEKEEPERS' COLUMN.

As we said before, we propose to give in this column only such matter as is furnished by ladies who have tested and know the quality of the recipes offered. It is of no consequence where they come from originally, so they are known to be good.

The following two we get from a a very young housekeeper, who we make no doubt intends to be a very good one. This thing of making terrapins out of ducks (though it does not claim to be original) is a good idea to begin with. We heard some one say once that he was a blessed man who invented the eating of terrapins—we think the woman more blessed who invented the cooking of them. But in this time of high prices of the terrapin, what is to be said of her who will make a duck answer the same good end.

The cake recipe comes from another lady, and we do not doubt its excellence.

We know that the *Farmer* is growing in favor with its lady readers. Will they not give us a little more help in this department?

TERRAPIN DUCKS.—Cut in small pieces a large duck and stew it in merely as much water as will cover it well and keep it from burning.—Let it stew gently and skim it. When it is done, take it out and cut all the meat off the bones in little bits. Return the meat to the stew-pan and lay it in its own gravy, and simmer gently till it comes to a boil, keeping it covered; then thicken it with a little flour, and two beaten yolks of raw eggs; add two wine glasses of Sherry or Madeira wine and two hard-boiled eggs, cut in small pieces.

LEMON CREAM.—One pint of cold water, six eggs, one and a half lemon; rub the peel on sugar before cutting it, then squeeze and mix it with the water; strain it, beat the eggs till very light, put it on the fire and keep stirring till sufficiently thick, but do not let it boil; sweeten the lemonade before adding the eggs.

COUDALOUPE CAKE FOR TEA.—Take one pound of flour, one pint of milk, and one cent's worth of yeast; set it to rise; then work half pound of butter and half pound of white sugar to a cream; 6 eggs beaten very light. After the sugar, butter and eggs are well worked together add the sponge, which should be very light; then add another pound of flour, half pound of raisins and a half pound of currants. You can add nutmegs, or any other spice, to suit your taste. Flour your fruit well before they are put in. It should bake an hour and a quarter at least. It is very nice cold, but it is generally eaten warm.

## Experiments with Fertilisers, and in Saving Fodder.

We are indebted to Mr. T. B. Coursy, Corresponding Secretary of the Agricultural Society of Kent county, Delaware, for a copy of the proceedings of that Society, at its annual meeting, and two reports of experiments made by himself the past season.

Among the proceedings of the Society, we find a resolution appointing, T. B. Coursy, Martin Harington, and J. G. Waples, a committee "to make experiment with regard to the value of different fertilising agents, and that the manufacturers of said agents be requested to furnish facilities for such experiments on the most favorable terms." Of course these experiments, which we understand will continue through a series of years, will be reported annually to the Society. Manufacturers, who may furnish fertilisers for experiment, will have the benefit of their report, and any profits arising from the use of them, will enure to the benefit of the Society. Mr. Coursy has proved himself a careful and zealous experimenter, and the fertilisers will no doubt be fairly tested.

The experiments of last season, as we find them reported, are not of special interest, having all resulted in loss, owing to the very dry season. We suggest that trial be made this year of much earlier application of the fertilisers—say soon after the first ploughing of the corn land—that the Spring rains may act upon them.

Mr. Coursy's experiment in saving fodder is an interesting one, and will be repeated, we hope, this season. We append the result, as given by him. The great apparent loss of corn, by cutting off at the ground, is at variance with the general opinion, and should arrest the attention of corn growers. The report concludes as follows:

"The above figures show that cutting by the ground is the most wasteful system as in the case No. 4 and No. 5, has sustained a greater loss in weight of shelled grain than No. 1 when all the fodder was taken from it.

No. 2 which had the tops taken from it, sustained a loss of only 21 lbs. per acre, and it would seem (if this experiment is to be relied on,) that this would be the most desirable mode of foddering; as the tops can be saved at a comparatively trifling cost of labor, and may be taken while quite green with but little injury to the corn, and are convenient to handle, while corn cut by the ground, (especially large corn,) is very cumbersome and unmanageable, requiring a large amount of house-room to store it, or is very much wasted, and almost worthless if left

to the weather; besides this, the corn is much more liable to rot in the shock than if it stood on the stock; and furthermore, the stalks left standing would make good winter pasture for cattle, as the dry blades would nearly all be stripped by them from the stalks.

No. 3 seems to rank according to the number, that, is, third-rate, having lost 2½ bushels per acre by having the blades taken from the stalks, and leaving the tops standing.

No. 4 and 5 each were cut by the ground, and each lost 4 bushels and 25 lbs. very nearly 5 bushels each per acre.

Now if we assume that a field of 50 bushels per acre would, by cutting by the ground, sustain a loss in proportion to this experiment, it would seem much better to let the fodder remain on the stalks or blow-away, if blow it must; for the loss being 5 bushels in 16 would by the same rule be 50 in 160. Though the loss might not be so great in a full crop, especially if the corn was allowed to ripen before it was cut, neither would the loss have been so great in this piece had it remained until dead ripe, but in that case the fodder would be almost worthless. The fodder was gathered at the time when thought to be in the best condition for good food, and many of my neighbors gathered fodder much greener than this.

By the system of topping and blading there would be 144 lbs. of blades and 51 bundles of tops per acre, the former worth $2.16, and the latter about one dollar. We estimate here that the cost of saving is equal to one-half, which would only leave $1.58 worth of fodder against a loss of 5 bushels of corn on a crop of only 16 bushels per acre and the loss would be much greater on a large crop, for the fodder would not increase in proportion to the corn."

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☞We give below the article of Dr. Pendleton, of Louisa Co., Va., on the subject of "Peruvian Guano and Phosphates." We made and commented on an extract from this article last month. The subject is one of great interest and importance in view of the enormous sums of money annually expended in commercial fertilizers. We agree entirely with Dr. P. as to the notion that Peruvian guano is in any proper sense of the word "stimulating." The apparent stimulus is in the abundant supply of available plant food, furnished in the guano itself by its action, according to the theory in which we concur, upon the mineral constituents of the soil before unavailable. If these constituents, as is generally assumed, are in limited supply in all soils, the effect of the guano in the increased production of crops, must unquestionably exhaust them sooner or later, as they may be less or more abundant. But if, as Dr. Pendleton maintains, and as we have maintained, even our most "worn out" soils contain these mineral elements in unlimited supply, in such combinations as can only be made available by the most vigorous use of ways and means to that end, then it is not at all probable that repeated applications of Peruvian guano, with its large percentage of one of the most important of these mineral constituents, tends to "a complete and hopeless exhaustion of the soil."

## "Peruvian Guano and Phosphates."

"With no sort of propriety can it be said that Peruvian guano is a *stimulant* to vegetation, in the common sense of the word—1st, because it has almost no stimulating property whatever; and 2d, because if it had, vegetation itself is not, and cannot be the subject of *stimulation*.—We very properly call alcohol a stimulant, simply and only for the reason, that when it is brought in contact with the sensation nerves, and blood-vessels, of an *animal*, it produces in them a peculiar irritation or excitement, called *stimulation;* but as guano is almost devoid of any stimulating principle of any kind, and as plants have neither nerves, blood-vessels, nor sensation, nor any thing else precisely analogous thereto, of course it would be simply absurd to liken the action of the one, on the vegetable organism, to that of the other on the animal economy.

Equally true and demonstrable is it, that guano does not *stimulate* plants in any manner or sense whatever. No doubt there are many very credulous farmers, who, making it a point to believe every thing they read in the advertisements of interested manure *manufacturers*, very dogmatically assert the contrary of this, and talk very flippantly on the subject, who have no definite views of any kind, as to the action of guano. There are others, however, who make a sort of figurative application of the word *stimulant*, and with some show of plausibility contend, that as guano (because of its relatively large per centage of ammonia) uniformly and invariably causes a rapid and excessive growth of the stalks and leaves, and corresponding extension of the roots of plants, its constant and inevitable tendency, is to drain the soil of the mineral constituents of plants, and that a frequent application of this fertilizer, to the same land, will sooner or later—surely—effect a complete and hopeless exhaustion of the soil, by depriving it of one or more of the minerals in question. But

this whole theory is false, because its premises are false, and so the conclusions derived therefrom, are entirely fallacious. The fact is, the aggregate amount of mineral matter applied to the soil in any ordinary application of guano, is nearly double, and of *phosphates* in particular, more than double that abstracted from the soil in any ordinary crop, say of wheat; and besides, there is *no sort of proof, chemical, agricultural, or otherwise, that a generality of soils, no matter how worn and exhausted by continuous cropping, do not contain, naturally, an ample sufficiency of every mineral necessary, to meet in any judicious rotation the demands of any ordinary cereal crop for many centuries to come.*

Those who so confidently rely on the evidence which chemical analysis affords, of a deficiency of mineral matter in the soil, should know that in a single acre, cultivated to the depth of one foot, there is of arable soil by weight, nearly five million pounds, and that in the usual analysis of a mere *thimbleful* (100 grains) of such soil, the *trace* of the chemist of a mineral, as of lime for example, would doubtless be found to be, could it be weighed, and then computed for the entire acre, quite enough of that *earth*, as mere plant-food, to grow successive crops of wheat for a thousand years! and that a soil exhibiting of *phosphates almost no trace at all*, that the most delicate *tests* can detect, might yet after all contain phosphoric acid, sufficient to feed abundantly crops of corn and wheat for ages to come!

But in point of fact, there is abundant proof of the presence, in a generality of soils, however exhausted of every necessary *mineral*, in the fact, that when such soils are turned out to rest, they invariably cover themselves with a natural vegetation of some kind. That the amount of mineral matter naturally present in these soils is even considerable, is demonstrated by the heavy growth of pines, which quickly appear on an old field which has been turned out, and that the amount is at least often ample for many years has been fully established by the very elaborate and complete experiments of Mr. Lawes, and other eminent practical farmers of England, who on a great variety of exhausted soils, grew crops of wheat for many years in succession, on the same land, with *ammonia alone*, and with a marked increase in the yield each year.

It is idle then to suppose that a single application or any number of applications of Peruvian guano would tend to impoverish the soil, by exhausting its supply of mineral matter; and it would be equally irrational to conclude that the All-wise Creator ever designed that the farmer should be able by any means at his command, to effect a complete exhaustion of the soil. He could not do it if he would, for the very simple reason that the various mineral constituents which enter into the composition of soils are controlled by fixed and immutable laws which forbid it. They are not left wholly to the caprice of the farmer, and when he has done his best, or his worst to waste and ruin his *inheritance*, there still remains in the soil all the elements of its own renovation, for the promise is, and it cannot fail, that while 'the earth remaineth, seed time and harvest shall not cease.'"—*Christian Intelligencer.* P. B. P.

## Grapes Under Glass.

"One needs a professional gardener to grow grapes under glass, or to be able to give his own time to the business. They need a little care every day in regulating the temperature, and for want of this the crop will not be remunerative. A man should have a long purse to grow grapes under a glass, or much leisure."—*Homestead.*

"We do not know from what data the above conclusion has been derived, but we unhesitatingly assert that no fruit of equal excellence can be produced with less trouble or expense than grapes under glass. With regard to the daily regulation of the temperature, there is no such nicety required, as would call for such leisure. In our number for December last, we alluded to a system of management, by which grapes are grown without interfering with the ventilators for months. We are perfectly aware that many growers of this fruit practice a system of opening and closing ventilators daily, but we have very conclusive evidence that such practice is not necessary to grow grapes in cold graperies. Even in forcing houses it is altogether unnecessary, and more frequently injurious than beneficial.

We regret to observe the promulgation of such remarks as the above quotation, as they tend to retard progress, and are not in accordance with the experience of others."—*Farm. and Gardener.*

WORMS IN HORSES.—A correspondent of the *Southern Cultivator* gives what he calls an infallible remedy: "Give the horse for six nights in succession, in his oats or grits, a large spoonful of ashes from fresh burnt cobs or hickory; at the end of the six nights, give him for ten days or a fortnight, a large spoonful of poplar bark, (pounded fine,) in his food. The bark is from the poplar found in swamps. The bark must be dried before the fire in order to be pounded fine."

## The Difference in Value of Land Producing Fifteen and Thirty Bushels of Wheat per Acre.

*To the Editor of the American Farmer:*

DEAR SIR: In the last issue of the "Farmer," a gentleman who subscribes himself B., has respectfully submitted a question to the readers of your valuable Agricultural Journal.

Question as follows: "There are two fields, or farms; one of them has been managed in the usual way of farming, and is capable of producing fifteen bushels of wheat per acre, and the current price of land in that condition is forty dollars per acre. The other field, or farm, is so well improved, by superior management, that it has the capacity of producing thirty bushels per acre. Now what is the value of the last named tract of land per acre upon the same data? Please furnish the figures." I regard the question, Mr. Editor, of great importance to the agriculturist, and consequently feel a desire in hearing it answered by the various readers of the "Farmer." B. should, in my opinion, have stated his proposition a little more definitely. For instance—what does he call superior managament? Is there to be no more outlay of *capital* and *labor*, than in the usual way of farming? If he means simply good and deep ploughing, particular attention to clover, and the making and application of manure, without the expense of artificial manure to give land a capacity of producing thirty bushels of wheat per acre, it could be more readily solved—but if the land has to lay idle in grass for years, and then have guano, bone dust, or some other artificial means to grow thirty bushels of wheat per acre, it alters the calculation very much. B. should also have stated the kind of soil, so one could have varied the calculation accordingly. The answer which I submit for B.'s information is based upon the grey limestone land of the Valley of Virginia, and your correspondent knows from an experience of twenty-five years farming, that it needs no artificial manure to place it in the condition of growing thirty bushels of wheat per acre. Good and deep ploughing, from eight to ten inches in depth, a half bushel of plaster per acre annually, a bushel of clover seed for every five acres of land, convert all material into manure, and apply on the land to be planted in corn, every season, by ploughing it under; the rest of manure made to be applied in the fall of the year on wheat fallow or stubble land, as the case may be—and land can be farmed in the following manner and sustain its capacity for producing thirty bushels of wheat per acre: From one-quarter to one-fifth of cleared land in corn every year; two-fifths of cleared land in wheat every year—remainder of cleared land in grass, principally clover, and not too much stock in summer time to graze your fields naked, and you will need no artificial manures. I now submit the following as an answer to B.'s question, and contend that land that has the capacity of thirty bushels of wheat per acre, is worth $120 per acre instead of $40:

To plough, prepare, and seed an acre of land in wheat, fallow, or stubble, according to price of labor in Valley of Virginia, $5; to cut, draw, stack, thresh, and deliver to mill or depot, four miles off, $5. By credit of fifteen bushels, at $1 per bushel, $15—net profit on fifteen bushel crop —$5 per acre.

Now for the calculation of thirty bushels per acre: To plough, prepare, and seed an acre of land, $5; to cut, draw, stack, thresh, and deliver to mill or depot, $10; (note the labor is doubled.) By credit—thirty bushels per acre at $1 per bushel, $30—net profit per acre, $15, being three times as great as on the $40 land, and worth $120 per acre.

But presuming that the land which produces thirty bushels per acre is pretty near its capacity of production, and that the land that produces fifteen bushels per acre is capable of the same improvement by superior management—I would say the $40 land is the best investment—but if on the other hand, the $40 land is near its capacity of production, the $120 land is just as cheap as the $40 land, producing the same interest on investment. The $120 land produces more fodder, straw, grass, and consequently has the material to sustain itself, without artificial help. There is also a pleasure and gratification in working rich land, that is not known in the cultivation of poor or ordinary land—it ploughs lighter, is more readily pulverized, and the chances are always in its favor for producing a crop in a bad season. Joint worm, Hessian fly, and various other enemies of the wheat crop, make but little progress on rich land; and I believe from experience and observation, it is the only remedy to be relied upon for the successful growing of wheat in the Valley of Virginia.

B. will confer a favor on the various readers of your valuble Journal, by submitting his own views upon the question. I will also state, for the benefit of B., that in Lancaster county, Pennsylvania, the land is selling for $80 to $160 per acre—30 bushels of wheat per acre is a very ordinary crop there. E.

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Science is full of wonder.

## Production of Valuable Manure from the Air.

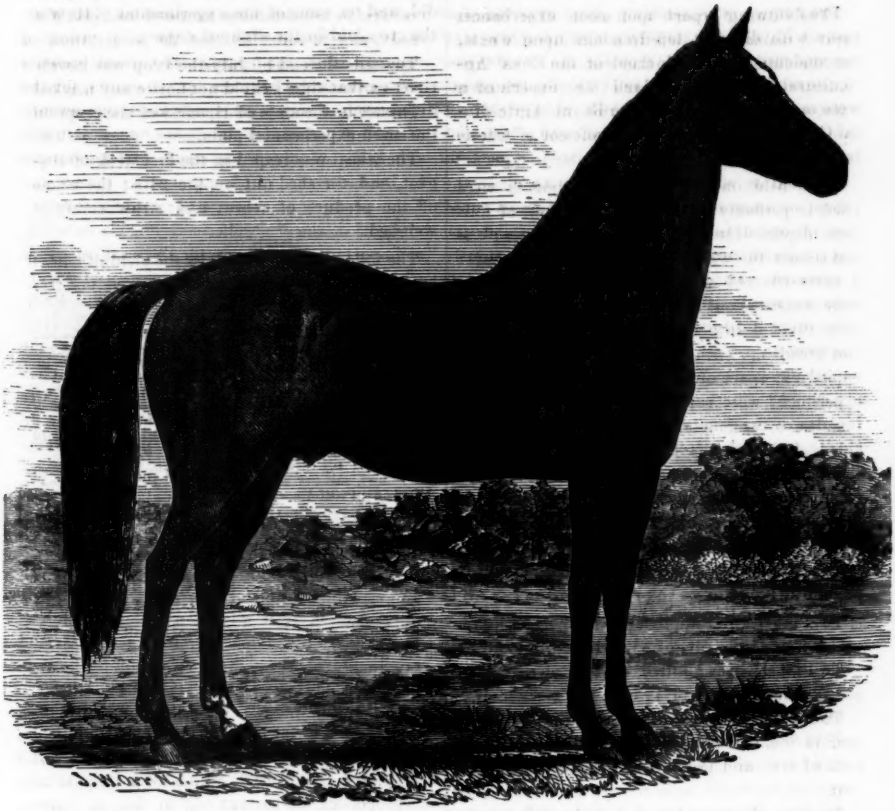
The value of guano and most other concentrated manures consists to a considerable extent of the ammonia which they contain. As three-quarters of the atmospheric air consists of nitrogen, and as hydrogen forms one-ninth of all pure water, if some cheap means could be found for inducing the hydrogen of water to enter into combination with the nitrogen of the air in the form of ammonia, this valuable manure could be produced in unlimited quantities, and the agricultural products of the world enormously increased. The efforts to do this have been at last crowned with success, as will be seen by the following abstract of some recent continental researches.

Since the remarkable labors of Messrs. Liebig, Schaltenmann, and Kuhlmann, on the fertilizing action of ammoniacal salts, the production of ammonia at a low price has become a problem of the highest interest to agriculture. But to arrive at this result it is necessary to obtain the nitrogen elsewhere than in the nitrogenous matters; which may, for the most part, be employed directly as manures, and of which the limited quantities and elevated price permits in any event only restricted and costly manufactures.

Atmospheric air is an inexhaustible and gratuitous source of nitrogen. However, this element presents so great an indifference in its chemical reactions, that, notwithstanding the numerous attempts which have been made, chemists have not heretofore succeeded in combining it with hydrogen so as to produce ammonia artificially. This result, so long desired, has been reserved for MM. Margueritte and De Sourdeval, who have obtained by employing an agent of which the remarkable properties and neat and precise reactions have permitted them to succeed where all others had failed. This agent is baryta, of which notice has recently been taken on account of the recent applications that M. Kuhlmann has made of it in painting, but of which no person suspected the part that it was to be called to play in the development of the agricultural riches of our country. The manufacture of ammonia is based on a fact entirely new, the cyanuration of barium. It had been believed until the present time that potash and soda alone had the property of determining the formation of cyanogen; that the earthy alkaline bases, baryta, for example, could not, in any case, form cyanides.

Messrs. Margueritte and De Sourdeval have ascertained that this opinion is entirely erroneous, and that baryta, much better than potash or soda, fixes the nitrogen of the air or of animal matters in considerable proportions. It is already understood that, for the preparation of Prussian blue, the cyanide of barium presents great advantages over that of potassium, for the equivalent of baryta costs only about one-seventh of that of potash. Thus do we find practically and really obtained the result first announced by Desfosses and vainly pursued in France and England, the manufacture of cyanides from the nitrogen of the atmospheric air. This solution, so important, depends on the essential difference which exists between the properties of baryta and those of potash; the first is infusible, fixed, porous, and becomes deeply cyanuretted without loss; the second is fusible, volatile, and becomes cyanuretted only at the surface, and suffers by volatilization a loss which amounts to fifty per cent. After the cyanide of barium was obtained, the grand problem for Messrs. Margueritte and De Sourdeval to resolve was the transformation of the cyanide into ammonia by means at the same time simple, rapid, and inexpensive. The following is the operation:

In an earthen retort is calcined, at an elevated and sustained temperature, a mixture of carbonate of baryta, iron filings in the proportion of about thirty per cent., the refuse of coal tar and sawdust. This produces a reduction to the state of anhydrous baryta, of the greater part of the carbonate employed. Afterward is slowly passed a current of air across the porous mass, the oxygen of which is converted into carbonic oxyd by its passage over a column of incandescent charcoal, while its nitrogen, in presence of the charcoal and of the barium, transforms itself into cyanogen and produces considerable quantities of cyanide. In effect, the matter sheltered from the air and cooled, and washed with boiling water, gives with the salts of iron an abundant precipitate of Prussian blue. The mixture thus calcined and cyanuretted is received into a cylinder of either cast or wrought iron, which serves both as an extinguisher and as an apparatus for the transformation of the cyanuret.—Through this cylinder, at a temperature less than 300° (Centigrade) is passed a current of steam, which disengages, under the form of ammonia, all the nitrogen contained in the cyanide of barium. It is impossible to foresee all the results of this great discovery. Among other things, it suggests the production of nitric acid from the air by oxydizing ammonia.—*London Chem. News.*



## BLACK HAWK.

Black Hawk, (late Hardroad,) now the property of S.W. Ficklin, of Belmont, near Charlottesville, Virginia, was foaled the property of Col. Bela Howe, of Shoreham, Vermont; his dam was a raven black, by a colt of old Hamiltonian, owned by Isaac Bishop, Granville, Vermont.

Black Hawk was sired by Hill's famous Black Hawk; he by Sherman, and he by Justin Morgan; is now eleven years old, a glossy black, 15½ hands high, weighs 1085 pounds—is perfection in form and power, his gait and style improving his appearance so much, it is difficult to believe him to be the horse the cut above represents. He was trained three weeks, when six years old, and trotted a race with Sherman Morgan or North Horse (his half brother) over the Colchester track, near Burlington, Vermont, making six heats of one mile each, trotting a mile in 2.44, and has been kept since only for breeding purposes, and the last eighteen months as such by his present owner.

## Top-Dressings upon Wheat—Suggestions for Experiments.

The following report upon some experiments made with different top-dressings upon wheat, we condense from the Journal of the Royal Agricultural Society of England; the experiments were made on the farm of the Royal Agricultural College, by Dr. Voelcker, Professor of Chemistry:

"The field on which the experiments were tried is perfectly level, and throughout of uniform depth. Its extent is about 20 acres; the last season the whole was in wheat after seeds; 2 acres covered with a very unequal growth were measured out for the experiments, and carefully divided into eight parts of equal length and breadth. Each experimental plat thus occupied the space of ¼ acre. The 2 acres under experiment were surrounded by a considerable breadth of the general wheat crop, except on one side. Although the headland, and a portion of the rest of the land, separated on that side of the experimented plats from the adjoining hedge, it was considered prudent to reject the ¼ acre next to the hedge. Seven plats of ¼ acre each in extent were then left. These plats were manured as follows:

To Plat I. was applied 70 lbs. of Peruvian guano; or at the rate of 2½ cwt. per acre.

To Plat II. was applied 49 lbs. of nitrate of soda; or at the rate of 1¾ cwt. per acre.

To Plat III. was applied 45 lbs. nitrate of soda and 42 lbs. common salt; or at the rate of 1½ cwt. of salt, and 180 lbs. of nitrate of soda per acre.

To Plat IV. was applied 1 cwt. of Proctor's wheat manure; or at the rate of 4 cwt. per acre.

To Plat V. was applied 1½ cwt. of the same manure; or at the rate of 6 cwt. per acre.

Plat VI. was left unmanured.

To Plat VII. was applied about 1 ton of chalk-marl; or at the rate of about 4 tons per acre.

The quantities of the different fertilizers were obtained in each case at an expense of £1 12s. 6d. per acre, except the larger dose of wheat-manure on Plat V., the cost of which was £2 8s. per acre.

The manures were all finely sifted, (except the marl,) mixed with about 10 times their weight of fine soil, and sown broadcast on the afternoon of the 22d of March. The land was clean, in good condition, and moist. The day on which the top-dressings were applied was calm and cloudy; a moderate rain that fell on the next day washed the various manures into the soil, and secured at once their uniform distribution. The season, on the whole, was favorable to wheat, the weather at harvest time was unusually splendid, and on none of the experimental plats was the crop laid in the slightest degree.

Towards the end of July the crop was nearly ripe; at that time I could not notice any marked difference in the state of ripeness of the crops on the seven experimental plats.

The wheat was reaped in the first week of August, and threshed out on the 24th; the whole of the produce of wheat and straw carefully weighed.

The following table exhibits the yield of wheat of each experimental plat, and the produce calculated per acre:"

| Plat. | | Produce in Wheat per Plat. | | Produce in Wheat per Acre. | |
|---|---|---|---|---|---|
| | | lbs. | bus. | lbs. | bus. |
| I. | 2½ cwt. guano per acre.. | 601½ | 10 | 2406 | 40 1-10 |
| II. | 1¾ cwt. nitrate soda do.. | 570 | 9½ | 2280 | 38 |
| III. | 180 lbs. nit. soda and 1½ cwt. salt per acre..... | 609 | 10 | 2436 | 40 6-10 |
| IV. | 4 cwt. Proctor's wheat manure per acre..... | 595 | 10 | 2370 | 39 1-2 |
| V. | 6 cwt. do. do..... | 663 | 11 | 2662 | 44 1-5 |
| VI. | Unmanured..... | 405 | 6¾ | 1620 | 27 |
| VII | Marl, 4 tons per acre..... | 404¼ | 6¾ | 1618 | 27 |

The table showing the yield of straw, and that showing the increased produce of wheat per acre, we omit.

"In some parts of England chalk-marl is applied with considerable benefit to the wheat crop, but as the soil of the experimental field contained 18 per cent. of carbonate of lime, it could not be expected that a marl, which owes its fertilizing properties almost entirely to the carbonate of lime and to a little phosphate of lime which it contains, should produce any marked effect upon the wheat crop. Indeed, I did not expect any increase from the application of this marl. We may learn from this result that the efficiency of a manure is greatly affected by the chemical composition of the soil to which it is applied."

The chief points of interest which attach to these experiments are:

1. That nitrate of soda applied by itself materially increased the yield of both straw and wheat.

2. That the admixture of salt to nitrate of soda was found to be beneficial.

3. That guano produced as good a result as nitrate of soda.

4. That the increase in wheat and straw corresponded with the quantity of wheat manure which was used.

5. That ammonia and nitrogenized organic

matters had a most marked and decidedly beneficial effect.

"It may not be amiss to contemplate these experiments in an economical point of view, and to ascertain to what extent the different top-dressings have repaid the outlay of money.—Leaving unnoticed the extra produce of straw, which in some cases was considerable, I shall only take into account the produce in wheat:

| Plat. | | Money incre. of Wheat. | Cost of Manure. | Clear Profit. |
|---|---|---|---|---|
| | | £ s. d. | £ s. d. | £ s. d. |
| I. | Guano..... | 3 8 9 | 1 12 6 | 1 16 3 |
| II. | Nitrate of soda..... | 2 17 9 | 1 12 6 | 1 5 3 |
| III. | Nitrate of soda and salt | 3 11 5 | 1 12 6 | 1 18 11 |
| IV. | 4 cwt. of wheat-manure | 3 5 7 | 1 12 6 | 1 13 1 |
| V. | 6 cwt. do. do. | 4 10 4 | 2 8 0 | 2 2 4 |
| VI. | Unmanured ..... | .... | .... | .... |
| | | | | lose. |
| VII | Chalk-marl..... | none. | 1 12 6 | 1 12 6 |

"It will be seen that, with the exception of the chalk-marl, all the top-dressings paid very well, and that the more liberal outlay for manure produced by far the best return for money."

We present the above abstract of the experiment of Dr. Voelcker, not so much for any particular light that they may throw upon the cultivation of wheat in our country, as for the purpose of showing how experiments of this, and a kindred nature, should be conducted, if we expect to derive such results from them as may be relied on with confidence. It also affords us an occasion for making some suggestions, which we throw out, in the hope that many of our friends may be induced to undertake similar experiments on this, or some other subject of equal importance to the agricultural world.

The information conveyed to the English farmers—and to us—in these experiments is distinct, positive, and highly practical. We are informed as to the character of the soil upon which they were made; the portion of the field experimented upon was of uniform quality, and the stand of wheat was nearly or quite uniform on all the plats; one of the plats was left without manure, so that its yield, being the normal yield of the field without manure, might serve as the standard of comparison for that of all the others; the different manures were all applied at the same time, and in the same way; the exact amount applied in each case, and its cost is given; the exact yield of each of the plats is given, and consequently, the increase in the yield of each manured portion over the unmanured becomes known; and finally, the price of wheat being given, we have the clear profits per acre of each manured portion over the unmanured. Now, let us suppose that the Professor, as he proposes to do, continues these experiments for a series of years—observes the effect of these manures on the other crops in the rotation—studies the effects of season, &c., &c., upon succeeding crops of wheat when top-dressed in the same way, &c., can any one doubt the great practical value of his results?

Our system of farming is somewhat different from that of the English, and the manures at our disposal are not in all respects the same as theirs—yet it is just as important for us to know both the actual and relative value of our manures, not only for wheat, but for all of our crops, as it is for the English. That we have much to learn there can be no doubt. We remember a discussion which took place at the first meeting of the State Agricultural Society upon the use of Peruvian guano; all who took part in the discussion were thoroughly convinced of its great value as a manure, and yet many of those who had used it extensively, were uncertain as to whether they had derived any pecuniary benefit from it—they were not sure that it paid. In other words, they were groping in the dark on an all important subject.

But while there is much yet to be learned about Peruvian guano, there are concentrated and expensive manures, into some of which Peruvian guano enters as a constituent; it is important that we should know more of their practical value, as compared with Peruvian guano, and with each other. For example, we have the Manipulated guanos, composed of Peruvian guano, bone ash, and phosphatic guano, or of the first and some form of the latter; the super-phosphates; ammoniated super-phosphate; soluble phospho-Peruvian guano; bone dust, &c. A large amount of capital is invested in these manures, and of course they are being largely purchased by farmers; it becomes a question of importance not only to know whether any or all of these pay on particular crops, but to ascertain as nearly as possible which of them, in the long run, will yield the largest return for the money expended. Let us have Peruvian guanos and some of these manures tried side by side on wheat, or tobacco, corn, meadow, &c.; let us learn which, if any of them, is to be relied on for securing a stand of clover after wheat; let these, and other important practical problems receive solutions by experiments similar to those of Dr. Voelcker, and then may we look for results which will be as interesting as useful.—*Southern Planter.*

## Price of Breadstuffs.

The following, which we clip from the *Country Gentleman*, will give some idea as to the condition of the Breadstuff supply in England and the prospect as to prices of grain:

"The Mark Lane Express, just received, under date of the 18th ult., devotes great space to extended reports upon the results of the crops of 1860, and the prospect of the Wheat crop of 1861. These reports come from different parts of each county in England, and number upwards of *three hundred*—so that, as will be readily understood, they must show very fairly the exact condition of the whole country at present, with regard to the points under consideration. 'Both in respect to cereal and root crops,' says the editorial abstract, 'the past year has been calamitous for the farmer, as well as to the country at large.'

'A vast amount of human food, as well as that for cattle, has been destroyed by weather such as we have had no parallel since 1816. This alone, notwithstanding the largest importations ever realized, fully accounts for the present high range of agricultural produce.

'A still more important fact is also elicited by these reports, relative to the breadth of land sown hitherto with wheat for the next crop.—This appears to be quite as deficient as in the memorable autumn and winter of 1852-53, and probably more so. If the next two months should prove unfavorable to the spring sowing, the land will be laid down with other grain than wheat. Fears, too, are entertained that a large proportion of the wheat already sown will not vegetate, or has been destroyed by the frost, in consequence of its weak state from late sowing and the immature condition of the seed. There is consequently the fear of a deficient harvest next season, which it will be well for those who are more immediately concerned to keep in view, and to watch with vigilant attention the influence of the rising year upon the growing crop.'

"The weather of the coming spring in England will therefore be watched with scarcely less care than that of last autumn, when her grain fields were again and again prostrated by storms, and her harvests exposed so long and so destructively. There seems to be no reason for doubt that all the breadstuffs we can spare will find a market, and the opening of navigation, now close at hand, will probably witness great activity in their shipment from the interior to the seaboard.

"Shall we be wrong in advising our farmers to sow largely this spring of the different grains? It is scarcely to be anticipated that we shall have, over so wide an extent of country, and with so few drawbacks upon production, a second season like that of 1860: if we do not, with as large a breadth under the cereals, we shall yet, in all probability, have considerable to export; while, if we should, will not the farmer who has the more grain to dispose of, be so much better prepared to bear an unremunerative price?"

## Deep Ploughing for Wheat.

MR. EDITOR: I am an advocate for deep and thorough ploughing, but there is a limit to all things, and consequently to deep ploughing. My experience has taught me, that after having prepared my ground well for the crops which precede my wheat crop, very deep ploughing for the latter is not only unnecessary, but I have sometimes been led to think, injurious. Now, strange as it may appear to some, it nevertheless cannot be successfully denied, that wheat, the roots of the young plants of which have embedded themselves in a firm soil underneath, always withstand the "*throwing out*" produced by alternate thawings and freezings, better than that in which the soil has been recently stirred to looseness to a greater depth. This grows out of the peculiar nature of the wheat plant, and points out the necessity on the part of the farmer, of studying closely the peculiar habits of growth of all the plants he cultivates.

Upon this subject an able writer says:

"Undoubtedly as great a depth of active soil as can possibly be obtained by mechanical means is not merely desirable, in a theoretical point of view, but ought to be one of the greatest practical objects which the farmer should strive after; still, there is a very important difference between a natural subsoil, indurated and rendered impervious to the action of the air by centuries of rest—its original hardness and impenetrability aggravated by a long course of continuous treading, in ploughing the surface soil—and that firm, mellow body of earth which is produced by deep cultivation. It is this firm, yet generous subsoil which forms so valuable a matrix for the roots of the wheat plant, and enables them to resist the loosening effects of alternate frosts and thaws during the winter."

Here then are two distinct and all important points for the farmer to understand. The first is a knowledge of the soil, and the second, a knowledge of the habits and peculiar characteristics of the plants he intends cultivating. He must learn to know, if he would be successful, what plants are best adapted to his soil, and understanding this thoroughly, it will be his own fault if he does not secure a moderate share of success at least.—J. T. OWENS, *in Farmer and Gardener*.

## Wholesale Produce Market.

*Prepared for the American Farmer by* ELLICOTT & HEWES, *Produce and Commission Merchants, 59 Exchange Place.*

BALTIMORE, March 25, 1861.

BUTTER.—Ohio, in brls. and kegs, solid packed, 10; Roll, 16; Virginia and Pennsylvania, in kegs and tubs, 11 to 14; Glades, new, 22; Goshen, new, 26.

BEESWAX—32 cts.

CHEESE.—Eastern 11¼, Western 10.

DRIED FRUIT.—Apples $1; Dried Peaches, unpeeled, $2, peeled $3.

EGGS—In barrels, 11¼ cents per dozen.

FEATHERS—50 cents for good Southern.

LARD.—Brls. 10, kegs 10¼, jars and other country packages, 11.

TALLOW—10¼ cents.

WOOL.—No sales.

## Baltimore Markets, March 25.

COTTON.—We quote prices as follows, viz:

| *Grades.* | *Upland.* | *Memphis and Gulf.* |
|---|---|---|
| Ordinary | 7¾a 8¼ | 7¾a 8¼ |
| Good do | 9¾a10¼ | 10¼a11¼ |
| Low Middling | 11¼a11¾ | 12 a12¼ |
| Middling | 12 a12¼ | 12¼a12¾ |
| Strict do | 12¼a12¾ | 12¾a13 |
| Good do | 12¾a13 | 13¼a13½ |
| Middling Fair | 13¼a13¾ | 13¾a14 |

FISH—We quote prices as follows: Mackerel, $6.75 for medium No. 3; $9.25 for large No. 3. Alewives, $4. Labrador Herrings, $4.50; Common Herrings, $2.50 per barrel.

FLOUR.—We quote Howard street Super, $5.12½; Extra, $5.75. City Mills Super, $5; Extra, $6.25. Family Flour, $6.50 to $7.00 for the different brands; very choice $8.00.

*Rye Flour and Corn Meal.*—We quote Rye Flour at $4.00. Corn Meal at $3.00 to 3.25 per bbl.

GRAIN.—The receipts are light. Red Wheat, $1 25 to $1.30 for fair to prime. White Wheat, $1.35 to $1.60 for medium to prime; $1.65 for choice lots.

*Corn.*—White, 62 to 64 cents; yellow, 59 to 60 cents.

*Oats.*—Virginia and Maryland, 30 to 32 cents. Pennsylvania, 33 to 34 cents.

*Rye.*—Maryland and Virginia, 64 to 66; Pennsylvania, 70 cents.

*Mill Feed.*—Brown stuff, 15; middlings, 28 cents per bushel.

PEAS AND BEANS.—Black-eyed Peas, $2.50 per 2 bush. bag. White Beans $1.20 to $1.25 per bushel.

SEEDS.—Clover seed, $5 to 6.00. Timothy, $3.00. Flaxseed, $1.30 per bushel.

PROVISIONS—*Bacon.*—Shoulders, at 8, and Sides at 10 cents per lb.

*Bulk Meat.*—Shoulders 6¾; Sides 8¾ cents per lb.

*Pork.*—Mess, $17.12½; Prime, $14; Rump, $13.

POTATOES.—Common, 50 to 65 cts.; White Mercers, 70 to 75 cents per bushel.

ASHES.—Pot $5.12½; Pearl $5.25 per 100 lbs.

TOBACCO.—We quote frosted Maryland at $2; common ground leaf, $3 to $4; middling, $5 to $8 50; best, $8.50 to $12; common crop, $2.50 to $3.50; middling, $4 to $4.50; good middling, $5 to $5.50; good leaf, $6.00 to $6.50; and fine at $7 to $12. We quote Bay Tobacco as follows: tips or tails at $3.50 to $4; ground leaf at $4.50 to $5.50; fine yellow at $9.50 to $14, and good red, $12 to $13. Nothing doing in Ohio Tobacco—inferior to good common at $3 to $4; red and spangled at $5 to $6.50; good and fine red and spangled at $7 to $8, and good fine yellow at $9 to $12. Kentucky Tobacco—common lugs at $4.25 to $4.75; good do. at $5.25 to $5.50; inferior leaf at $5.75 to $6.25; good do. at $6.50 to $7.50; fine at $7.50 to $9; choice at $10 to $12; and rich heavy Kentucky at $7 to $12.50.

GUANO AND OTHER FERTILIZERS.—Prices continue without change. We quote Peruvian at $61 to $62 per long ton, according to quantity—the former price being for 25 tons and upwards. For less than a ton, at the rate of $56 per ton of 2000 lbs.; California or Elide Guano, $45 per long ton; Manipulated, $47; Super-Phosphate, $45; Mexican, AA, $20 to $22; Baker's Island Guano, $40 per long ton; Jarvis Island Guano, $35 per long ton; Sombrero, $30 per long ton; Ichaboe Guano, $60. Navasa Guano, $25 per ton. Trego's Plant Food, $50 per ton of 2000 lbs.; Ground Bones, $27 per 2000 lbs. (packages extra.) Poudrette $10 per ton in bulk. Plaister, $1.25 per brl.

HAY AND STRAW.—Hay, $14 to $15 per ton. Rye Straw, $14 per ton.

GINSENG.—45 to 50 cents per lb.

CATTLE MARKET, March 21—The offerings at the Scales on Thursday footed up 750 head, being 200 more than last market day. The market was rather dull to-day, and prices were a shade lower. Of the above offerings, 200 head were driven to Philadelphia, 100 were left over unsold, and the balance (450 head) were taken by Baltimore butchers at prices ranging from $3 to $4.50, and averaging $3.75 per 100 lbs. This average shows a full decline of 25 cents per 100 lbs. A few lots of extra cattle were sold at a shade higher figures.

HOGS.—There was a plentiful supply of live Hogs in market to-day, but prices were not so firm. Sales were made of fair to prime lots at $7 to $7.50 per 100 lbs.

SHEEP were scarce, and prices consequently firmer.—Sales were made at from $4.50 to $5.50, gross.

## NEW ADVERTISEMENTS.


Ault & Son—Garden Seeds.
Baker, R. J.—Chemicals.
Bartholow, J. P.—Agricultural Warehouse.
Baltimore Fertilizing Co.—Manipulated Guano.
Dingee & Co., W. W.—Thresher and Cleaner.
Ficklin, S. W.—Breeding Stock.
Fisher & Co.—Extract of Tobacco.
Goldsborough, M.—Bay Stallion.
Gregory, Jas. J. H.—Cabbage Seeds.
Hussey, Mrs. E. B.—Mowers and Reapers.
Jackson & Co., Isaac—Plants, &c.
Knox, J.—Strawberry Plants, &c.
L. B.—Michigan Lands.
Marshall, Edwin—Small Fruits.
Malcom & Co., P.—Guano, &c.
Miner, T. B.—Concord Grape Vines.
Office—Small Farms.
Ray, B. F.—National Harvester.
Reese & Co, John S.—Phospho-Peruvian Guano.
Rogers & Gest—Seed Potatoes.
Tasker & Clark—Fertilizers.
Trego, Wm.—Plant Food.
Wilkes, Leyburn—Land Agency.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# AGRICULTURAL IMPLEMENTS, SEEDS AND FERTILIZERS.

## J. P. BARTHOLOW

Is pleased to call your attention to his Spring supplies of AGRICULTURAL IMPLEMENTS, SEEDS and FERTILIZERS. My stock is large and varied, comprising everything that is used for Agricultural purposes—among which are many new and approved Implements and Machines, as well as many new improvements on Machines and Implements of general use.

In extent, variety and quality, my stock is unsurpassed by any house in the trade in this section. My facilities enable me to offer superior inducements to persons purchasing from me, and I am prepared to fill orders at the lowest prices and on the most reasonable terms.

I have established a REPAIRING SHOP in connection with my Agricultural Warehouse, and I am prepared to

REPAIR AGRICULTURAL MACHINERY

In the best manner, on the shortest notice.

## HORTICULTURAL TOOLS of all kinds.

HORSE POWERS, PLOWS of all kinds, THRESHERS, REAPERS, MOWERS, GRANT'S FANS, MONTGOMERY'S FANS, HARROWS, PLOW CASTINGS and WOODS, CULTIVATORS, HORSE HOES, POTATO DIGGERS, TOBACCO CULTIVATORS, CORN SHELLERS, GRAIN and GUANO DRILLS, SEED DRILLS, OX YOKES, CHURNS, &c.

The above and all other Implements and Machines used by the Farmer and Planter, of the most approved kind. ALL ARTICLES GUARANTEED TO GIVE SATISFACTION.

I have just imported direct from Birmingham, England, a very large and superior lot of

"ELWELL" and "SEMPER" PLANTERS' HOES:

WEEDING HOES, HILLING HOES, PLANTERS' STEEL HOES, TRACE CHAINS, LOG CHAINS, HALTER and COW CHAINS, CURRY COMBS, &c.,

**AT 25 PER CENT. LOWER THAN THE USUAL PRICES.**

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My stock of these is now complete and extensive. The *Imported Seeds* are all of my own importation from the best and most reliable seedsmen in *England*, *France* and *Germany*.

My *American Seeds* are procured from the first seedsman of the country, with whom I have made arrangements to be at all times supplied with *fresh* and *genuine* Seeds.

LAWN GRASSES of all kinds; "Stone Mason Drumhead," "Winningstadt," "Early York" and all other kinds of CABBAGE; Peas, Beans, Beets, Tomato, Egg Plant, Cauliflower, Brocoli, Carrot, Parsnip, Onions, Lettuce, &c.—among which there are many rare and valuable kinds.

FIELD PEAS, SEED OATS, SEED CORN, HERDS' GRASS, ORCHARD GRASS, HUNGARIAN HONEY BLADE GRASS, CLOVER, TIMOTHY, &c.

A No. 1 PERUVIAN GUANO,
A A BROWN MEXICAN GUANO,
WHITE MEXICAN GUANO, SOMBRERO GUANO,
CAPE VERDE ISLAND GUANO.

**BONE DUST**—ground at my own mill and manufactured from bones that have never been boiled or calcined.

**Fowle's Soluble Phosphated Guano,**
**Baugh's Raw Bone Super-Phosphate.**
**Prepared Peruvian Guano,**

Manufactured by the "Virginia Land Improvement Co.," warranted superior to Peruvian Guano.

The above and all other Fertilizers for sale at the lowest market rates.

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558 *7th st., near Canal, opposite east end Centre Market,*
WASHINGTON, D. C.

april

# GUANO! GUANO!

## The Fertilizing Co. of Baltimore City

Having purchased the extensive and complete works of JOHN KETTLEWELL, Esq., are now prepared to execute orders for

## Kettlewell's Manipulated Guano, Nos. 1 and 2,

Which is extensively known and used throughout the Southern States as a Fertilizer. For yield of crop and improvement of land it stands unrivalled. It is therefore recommended with entire confidence for *Oats, Corn, Tobacco, all Vegetables*, and as a top-dressing for Wheat and Grass. The quality and quantity of *grain* produced by the use of this Fertilizer, is especially referred to.

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PRICE FOR No. 1.....$47 per Ton of 2000 lbs.
Do. No. 2..... 42 do. do.

## Kettlewell's Corn and Cotton Compound,

A new Fertilizer, prepared expressly for the growth of these plants—composed of elements entering into the composition of both, as ascertained by analysis. This Compound is earnestly recommended to Farmers as applicable to *hill* or *drill*, or sown broadcast. The price will commend it to all. Its value has been thoroughly demonstrated to be worthy of all confidence. A trial is earnestly solicited. PRICE—$35 per Ton of 2000 lbs.

## PHOSPHATIC GUANO,

Of highest standard—will be sold at the lowest market price.

## PERUVIAN GUANO,

Of No. 1 quality, at market price.

## PURE GROUND PLASTER.

Preparations are now in progress to furnish Planters with a choice article at lowest rates.

As the Company intend to confine themselves to vending and supplying all Fertilizers of known reputation, orders are respectfully solicited. Terms Cash or acceptable negotiable paper, interest added. Address orders to the Company, or to

**G. OBER, President, Nos. 6 & 7 Corn Exchange.**

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The undersigned having converted his Guano Works into an Incorporated Stock Company, known as the

*"FERTILIZING COMPANY OF BALTIMORE CITY,"*

Avails himself of the opportunity to return his grateful acknowledgments for the past confidence and support which has been extended to him personally, earnestly trusting that it will be continued and increased to still greater usefulness.

The Stockholders and Directors are composed of gentlemen of the first standing in this community, and the undersigned having retained an interest, will, as heretofore, continue to give his undivided attention and experience to the successful prosecution of the business.

april Respectfully, **JOHN KETTLEWELL.**

N. B. WORTHINGTON. THOMAS B. LEWIS.

# THE AMERICAN FARMER

# BUSINESS AGENCY.

## PERUVIAN GUANO,

As the best guarantee for its purity, will, in all cases, be shipped *directly from the Agency's Ware houses.*

PRICES:

| | | |
|---|---|---|
| 1 ton to 10 tons | $62.00 | per 2240 lbs. |
| 11 " 25 tons | 61.50 | " |
| 26 tons and upwards | 61.00 | " |

Drayage in all cases extra.

As no credit whatever is given by the Peruvian Agents, all orders must be accompanied with a remittance.

*Our arrangements* with *manufacturers* and *dealers* are such that we furnish any article of

## Fertilizers, Implements or Trees,

At *their prices*, WITHOUT CHARGE OF COMMISSION *to the purchaser.*

☞ OUR TERMS ARE CASH.

Address **WORTHINGTON & LEWIS,**
*"American Farmer" Office, Baltimore.*

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## Phosphatic Fertilizer,
### BONE DUST, and
## Meat and Bone Compost,

MANUFACTURED BY

**TASKER & CLARK,**

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The above manures are believed to be (and indeed have proven themselves to be) among the cheapest and best yet offered to the agricultural community.

For Wheat or Grass we would call special attention to our

PHOSPHATIC FERTILIZER,

While for Corn, Potatoes and Vegetables generally, the MEAT AND BONE COMPOST is unsurpassed, affording immediate nourishment to the growing crops, as well as permanently improving the soil.

BONE DUST, warranted pure, and prepared in a superior manner.

PRICES:

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|---|---|---|---|
| Phos. Fertilizer | $40 | per ton of 2000 lbs., | at Factory. |
| Meat & Bone Compost | 25 | " " | " |
| Bone Dust | 35 | " " | " |
| No. 1 do.—superfine | 40 | " " | " |

Orders may be sent to TASKER & CLARK, as above, or to JONATHAN TURNER, Agent, 17 PRATT STREET, BALTIMORE. ap-3t

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## Ault's Celebrated English Garden Seeds.

We have now in store and for sale, our supply of Seeds for this season, viz: CABBAGE, SUGAR BEET, CARROT, PARSNIP, MANGEL WORTZEL, PUMPKIN, PEAS, BEANS, RADISH, LETTUCE, AULT'S IMPROVED RUTA BAGA and other Turnip Seeds—also all other kinds of Garden Seeds.

A choice collection of English Flower Seeds.

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## SEED POTATOES.

EXTRA EARLY, BUCK EYE, EARLY JUNE and PINK EYE.

Also, the PEACH-BLOW POTATO, which is particularly adapted to Southern latitudes.

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